

# AGRICULTURAL OUTLOOK

Economic Research Service  
United States Department of Agriculture

September 1993

FILE COPY

*Strategies for*  
**Wetlands Protection  
& Restoration**

# AGRICULTURAL OUTLOOK



Grain-e Systems International



## Departments

- 2 Agricultural Economy**
- 17 Commodity Spotlight**  
Forest Products: Recycling for New Markets
- 20 Policy**  
New Marketing Loan Provisions
- 22 Rural Development**  
Poverty Is Persistent In Some Rural Areas
- Tobacco Economies: What's Ahead?

Thomas Marlin &amp; Cathy Greene

Joy Harwood &amp; Craig Jagger

Calvin Beale

Fred Gale

## Special Articles

- 32 Strategies for Wetlands Protection & Restoration**
- 37 China 2000: A Major Player In the Ag Trade Arena**

Ralph E. Heimlich &amp; Dwight M. Gadsby

Shwu-Eng Webb

## Statistical Indicators

<b>44 Summary</b>	<b>58 World Agriculture</b>
<b>45 U.S. &amp; Foreign Economic Data</b>	<b>59 U.S. Agricultural Trade</b>
<b>46 Farm Prices</b>	<b>62 Farm Income</b>
<b>47 Producer &amp; Consumer Prices</b>	<b>67 Food Expenditures</b>
<b>49 Farm-Retail Price Spreads</b>	<b>68 Transportation</b>
<b>50 Livestock &amp; Products</b>	<b>68 Indicators of Farm Productivity</b>
<b>54 Crops &amp; Products</b>	<b>69 Food Supply &amp; Use</b>

Economics Editor—Cathy Greene (202) 219-0313

Associate Editor—Robert Dismukes (202) 219-0313

Managing Editor—Mary Reardon (202) 219-0494

Overview Coordinators—Richard Stillman, Agnes Perez, Livestock; Grace Chomo, Carol Whitton, Field Crops; Glenn Zepp, Specialty Crops

Statistical Coordinator—Ann Duncan (202) 219-0313

Design &amp; Layout Coordinator—Victor Phillips, Jr.

Editorial Staff—Karen Sayre

Tabular Composition—Joyce Bailey, Ciola Peterson

The contents of this magazine have been approved by the World Agricultural Outlook Board and the summary released August 19, 1993. Price and quantity forecasts for crops are based on the August 11 World Agricultural Supply and Demand Estimates.

Materials may be reprinted without permission. Agricultural Outlook is printed monthly except for the January-February combined issue.

Annual subscription: \$35 (\$43.75 for foreign addresses, including Canada). Order from ERS-NASS, 341 Victory Drive, Herndon, VA 22070. Or call toll free, 1-800-999-6779 (U.S. and Canada only). All other areas, please call (703) 834-0125. Make check payable to ERS-NASS.

Time to renew? Your subscription to Agricultural Outlook expires in the month and year shown on the top line of your address label. Renew by calling 1-800-999-6779.

The next issue of Agricultural Outlook (AO-201) is scheduled for mailing on October 4, 1993. If you do not receive AO-201 by October 24, call the managing editor at (202) 219-0494 (be sure to have your mailing label handy). The full text of AO-201 will also be distributed electronically; additional information on this is available at (202) 720-5505.

## News of Wetlands Issues, Flood Impacts, China's Ag Trade Prospects, & New Products from Recycled Wood & Paper

### Agricultural Economy

**Crop estimates lowered:** USDA's first survey-based production forecasts for 1993/94 indicate that excess moisture and flooding in the Midwest and drought in the Southeast have caused substantial damage. The forecast corn yield of 116 bushels per acre is substantially lower than trend and the record 131.4 in 1992/93. The acreage forecast shows a substantial decrease in the portion of planted acres that will be harvested for grain. For the 1993/94 soybean crop, the yield forecast of 33.8 bushels per acre is down sharply from last year's record 37.6 bushels per acre. Also, USDA's early August surveys showed that soybean farmers in the Midwest planted less area than intended and that a much larger than normal portion of the crop would be abandoned.

### Rural Economy

**Tobacco economies endure:** What will be the impact on the economies of rural tobacco growing areas as U.S. cigarette consumption declines and lawmakers consider further increases in cigarette taxes? USDA's Economic Research Service (ERS) recently projected the economic impacts of a 30-percent decline in tobacco production similar to the decline experienced during the early 1980's.

The impact would be felt most keenly by the many individuals who depend on income from tobacco growing—mostly in the Southern states. However, tobacco farming actually accounts for a relatively small share of the local economy in most counties where it is grown, and the overall impact as a share of total economic activity in tobacco growing areas would be fairly small.

### Commodity Spotlight

**Recycled wood and paper:** The increasing efforts to conserve forest resources and reduce solid waste are speeding the development of products that use more recycled paper and wood and less virgin



timber. For example, a composite building material (called Environ), which looks like granite but has the construction properties of wood, is being manufactured with wastepaper and soybean meal.

Use of recycled wastepaper as a fiber input for production of paper and board is expected to accelerate through the end of the decade. The re-use of waste wood has been less common, but research and commercialization efforts in this area are increasing. USDA's Forest Service, for example, is developing technologies to create housing components from recycled materials.

### Policy

**New marketing loan provisions:** Marketing loan provisions are now available to eligible wheat and feed grain producers beginning with 1993 crops. Marketing loan provisions provide an additional repayment option for Commodity Credit Corporation (CCC) loans, helping to minimize potential loan forfeitures and accumulation of government stocks when prices are low relative to CCC loan rates. This helps keep CCC loan

programs from interfering with markets, and provides additional income support to producers when prices are low. Low early-season wheat prices have resulted in marketing loan benefits to some wheat producers totaling about \$700,000 as of August 5—mostly for Soft Red Winter wheat.

### Environment & Resources

**Wetlands issues debated:** Flooding in the Midwest this year has generated a myriad of questions about land use on a flood plain. In disaster relief legislation for the flooded areas, Congress included additional funds for the voluntary Wetlands Reserve Program (WRP) to provide assistance to farmers. Recent changes in regulations for protecting wetlands have led to Congressional and Administration proposals for regulatory reform. As the President's Office on Environmental Policy led an interagency task force in crafting a plan, bills addressing wetlands regulation have been introduced in Congress by advocates of both regulatory reform and stronger wetlands protection.

### World Agriculture & Trade

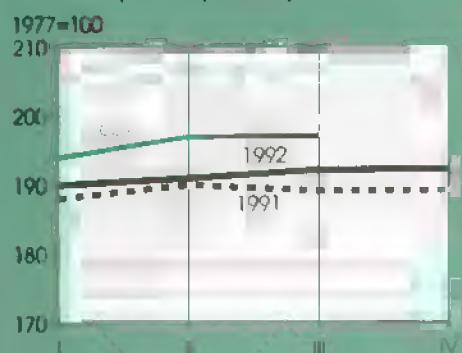
**China 2000—Ag trade projections:** As China becomes an increasingly large player in the global market economy in the 1990's, its pattern of growth in agricultural trade has become more uncertain. In the first of a two-part series, *Agricultural Outlook* projects China's agricultural trade prospects in the 1990's under several scenarios.

Under a "base scenario," generally assuming a continuation of past trends and economic relationships, ERS projects that China will become a small net exporter of rice and increase its net imports of wheat by the year 2000. An alternative scenario, assuming more fundamental changes in economic parameters such as China's food consumption patterns in the 1990's, suggests that China could also become a net importer of corn and soybeans by the end of the decade.

## Agricultural Economy

## Prime Indicators

### Index of prices paid by farmers<sup>1</sup>



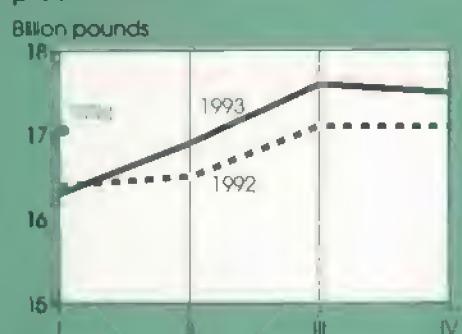
### Index of prices received by farmers<sup>1</sup>



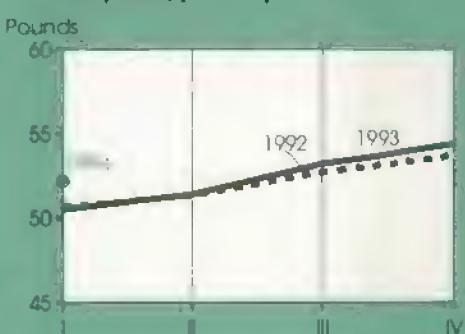
### Ratio of prices received/prices paid



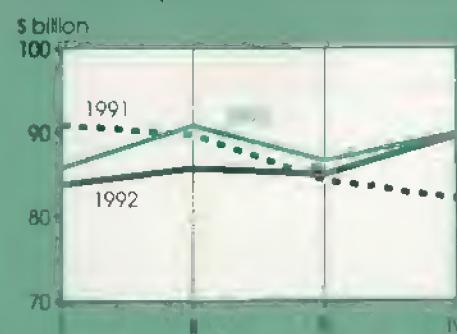
### Total red meat & poultry production<sup>2</sup>



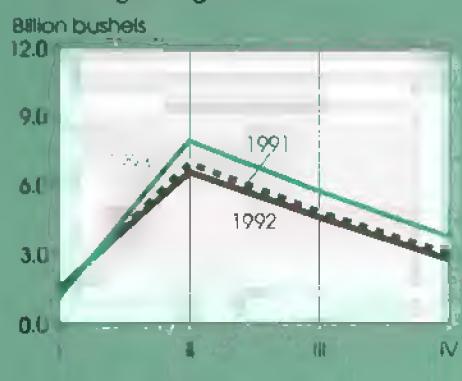
### Red meat & poultry consumption, per capita<sup>2,3</sup>



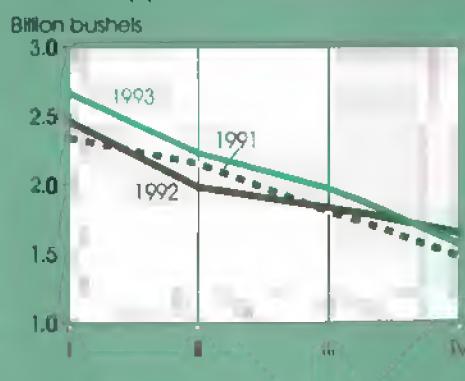
### Cash receipts from livestock & products<sup>4</sup>



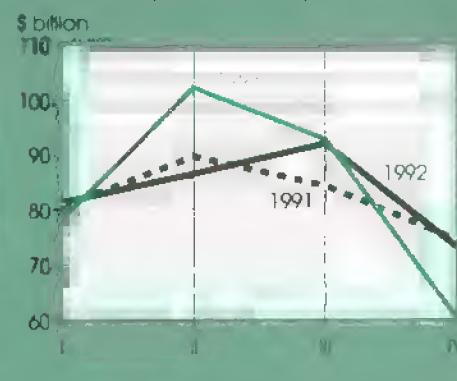
### Corn beginning stocks<sup>5</sup>



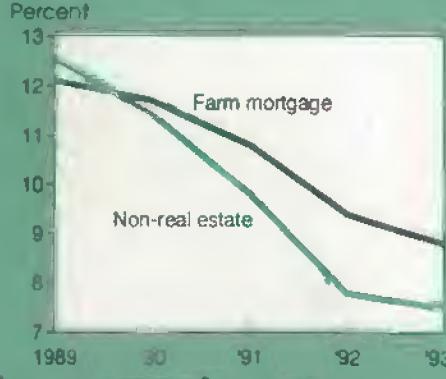
### Corn disappearance<sup>5</sup>



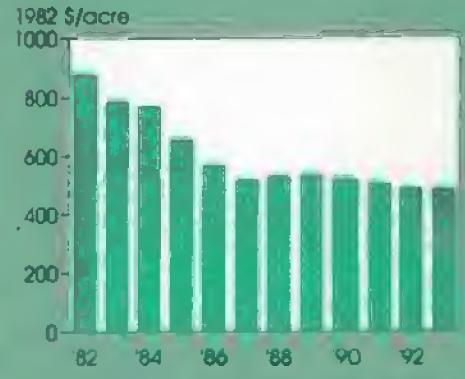
### Cash receipts from crops<sup>4</sup>



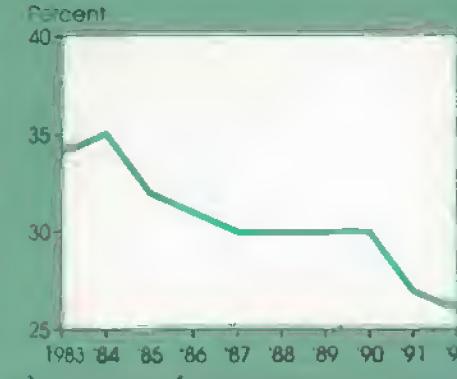
### Farm loan interest rates



### Average real value of farm real estate



### Farm value/retail food costs



<sup>1</sup> For all farm products. <sup>2</sup> Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts. <sup>3</sup> Retail weight. <sup>4</sup> Seasonally adjusted annual rate.

<sup>5</sup> Sept.-Nov.; II=Dec.-Feb.; III=Mar.-May.; IV=June-Aug. Marketing years ending with year indicated.

F=forecast



MSD AND HANDBOOK

feed the major rivers. Pooling has occurred in fields in the heavy rainfall areas of the Midwest, slowing growth and reducing yield prospects.

- The forecast corn yield of 116 bushels per acre is down 2 bushels from the July estimate, and is substantially lower than trend and the estimated record of 131.4 in the 1992/93 crop year.
- Production for the 1993/94 season is expected to reach 7.42 billion bushels—compared with 7.85 billion forecast in July—22 percent below the 1992/93 record harvest of 9.48 billion bushels.
- 95 percent this time last year; dough formation was low at 31 percent, compared with 40 percent last year.
- The domestic corn use estimate was decreased from 6.85 to 6.7 billion bushels.
- Farm price projections are in the range of \$2.15 to \$2.55 per bushel. With expectations of lower corn production, farm price estimates are up from the July forecast of \$2 to \$2.25.

# Field Crops Overview

USDA's corn and soybean production forecasts for 1993/94 have been revised downward in response to inclement weather in the Midwest and Southeast. Excessive moisture in the Midwest and flooding along the Mississippi River, the Missouri River, and their tributaries have reduced acreage and delayed plantings of corn and soybeans. Meanwhile, dry weather in the Southeast has adversely affected crop yields.

## Domestic Outlook— August Projections For 1993/94

*Corn Output  
Revised Downward*

Drought in the Southeast and unusually wet weather in the Midwest have resulted in lower projected 1993/94 production. Wet conditions in the Midwest contributed to a downward revision in projected yield and harvested acreage. Acreage along the Mississippi and Missouri Rivers has been lost, and fields flooded by the numerous tributaries that

U.S. Field Crops—Market Outlook at a Glance										
	Area									
	Planted	Harvested	Yield	Output	Total supply	Domestic use	Exports	Ending stocks	Farm price	
	— Mil. acres —		Bu/acre		— Mil. bu —				\$/bu	
Wheat										
1992/93	72.3	62.4	39.4	2,459	3,001	1,118	1,354	529	3.24	
1993/94	72.1	63.9	40.0	2,556	3,160	1,314	1,150	696	2.55-2.95	
Corn										
1992/93	79.3	72.1	131.4	9,479	10,585	6,760	1,675	2,150	2.05-2.10	
1993/94	73.7	64.0	116.0	7,423	9,583	6,700	1,475	1,408	2.15-2.55	
Sorghum										
1992/93	13.3	12.2	72.8	884	937	483	275	180	1.85-1.90	
1993/94	10.7	9.7	65.9	642	822	433	275	115	1.85-2.35	
Barley										
1992/93	7.8	7.3	62.4	458	596	364	80	152	2.04	
1993/94	7.9	7.5	61.9	467	638	390	80	168	1.95-2.35	
Oats										
1992/93	8.0	4.5	65.6	295	477	358	6	113	1.32	
1993/94	8.1	4.1	60.7	250	428	330	5	93	1.25-1.85	
Soybeans										
1992/93	59.3	58.4	37.6	2,197	2,477	1,412	775	290	5.60	
1993/94	59.5	58.3	33.8	1,902	2,197	1,352	655	190	6.00-7.30	
Rice										
1992/93	317	3.13	5,722	179.1	212.4	97.5	79.0	35.9	5.93	
1993/94	302	2.97	5,713	169.7	212.0	100.5	80.0	31.5	4.75-6.25	
Cotton										
1992/93	13.2	11.1	699	16.2	19.9	10.2	5.2	4.8	54.60*	
1993/94	13.7	13.3	668	18.5	23.1	10.3	6.3	6.8	**	

Based on August 11, 1993 World Agricultural Supply and Demand Estimates. U.S. marketing years for exports: 1992/93 estimates, 1993/94 projections.

<sup>1</sup>Weighted-average price for August 1-April 1; not a season average

"USDA is prohibited from publishing cotton price projections.

See table 17 for complete definitions of terms.

## Agricultural Economy

### Iowa's Corn and Soybean Crop Ratings Trail National Average

#### Corn

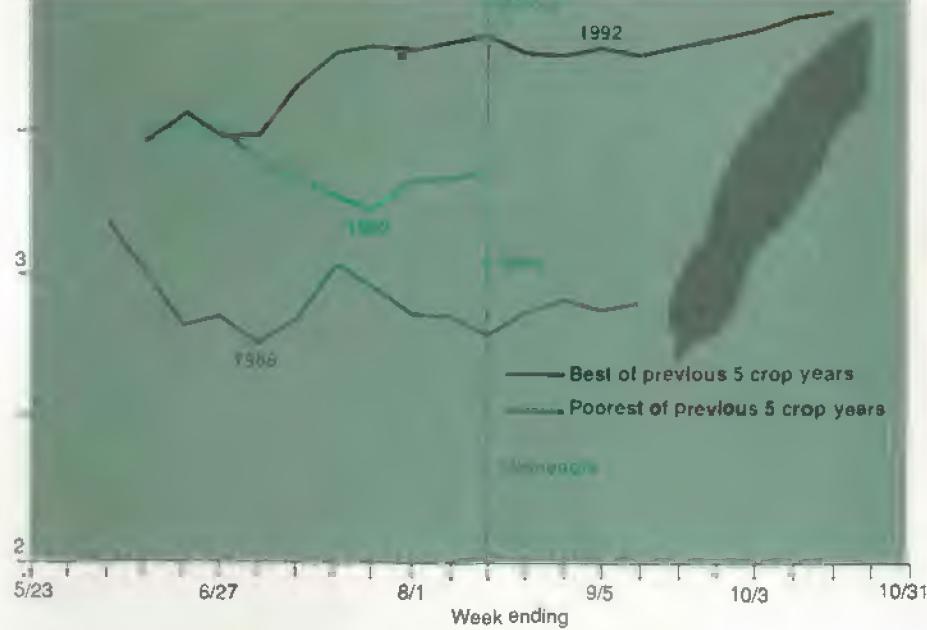
Rating



#### Soybeans

Rating

4



Ratings begin when 50 percent of crop has emerged and 50 percent is harvested.  
1 = Very poor; 2 = Poor; 3 = Fair; 4 = Good; 5 = Excellent.

- The export forecast has been reduced 25 million bushels to 1.475 billion bushels, reflecting large prospective foreign production and stocks.

### Soybean Output & Stocks Down

Above-average rain in the Midwest and drought in the Southeast has contributed to a lower production forecast for the 1993/94 soybean crop. Higher prices will likely contract soybean export demand. The forecast of lower production coupled with fairly constant domestic demand will tighten ending stocks of soybeans.

- The average yield prediction of 33.8 bushels per acre was revised downward from the July estimate of 34.1. Harvested acreage forecast at 58 million in July was reduced to 56.3 million acres.
- The August production forecast is down 73 million bushels from July's figure of 1.98 billion bushels. The forecast for 1993/94 is down substantially from the estimated record production of 2.2 billion bushels in the previous year.
- Expectations of lower production boosted the soybean price forecast above the \$7 high projected in July. The range of \$6-\$7.30 per bushel is the highest since the \$7.42-per-bushel average price in the drought year of 1988.
- Soybean use projections fell slightly, from 2.05 billion bushels in July to 2.01 billion in August. The forecast for ending stocks was adjusted from 225 to 190 million bushels between July and August.
- Soybean crop ratings as of August 15 were 47 percent good to excellent and 39 percent fair. Crops in Illinois, Indiana, Kansas, Michigan, and Ohio had the highest ratings. The southeastern states fared worst due to dry weather.

## High Wheat Yields Support Steady Returns

The 1993/94 wheat crop is expected to reach record-high yields and the highest level of production since 1990/91. At the same time, the projected season-average price is in the range of \$2.55 to \$2.95 per bushel—lower than 4 of the last 5 years.

How do current projections compare with longer term trends of several decades? A historical look at yields, real prices, and real returns since the 1950's indicates real returns per acre have remained relatively constant, with increasing yields offsetting the effects of decreasing prices.

Since 1950, wheat yields in the U.S. have been increasing in a steady upward trend. Average wheat yields have increased from 19 and 26 bushels per acre in the 1950's and 1960's, to 31 and 36 bushels per acre in the 1970's and 1980's. As yields have risen, the variability has increased, due partly to poor performance of the new high-yielding varieties under poor weather conditions.

Nominal prices increased during the 1940's and decreased through the 1950's and 1960's and early 1970's. In 1973, the average annual wheat price jumped to a high of over \$4 per bushel and, since 1973, has ranged from a high of \$4.09 in 1975 to a low of \$2.33 in 1978. Real wheat prices—nominal prices deflated by the wholesale price index (WPI, 1985=100) to reflect input prices—have shown a downward trend since 1949/50. Real prices peaked during the early 1970's, and were above trend only 5 out of the last 13 years.

Real gross returns per acre are calculated by multiplying the deflated price (WPI, 1985=100) by yield. Since 1949/50, real returns have averaged \$127 per acre and ranged from \$112 to \$145 per acre in 23 of the last 45 years. However, for the last 8 years, returns have been below trend. Real returns per acre have remained constant because increasing yields have offset the effect of decreasing prices.

[Bryan Just (202) 219-0840]

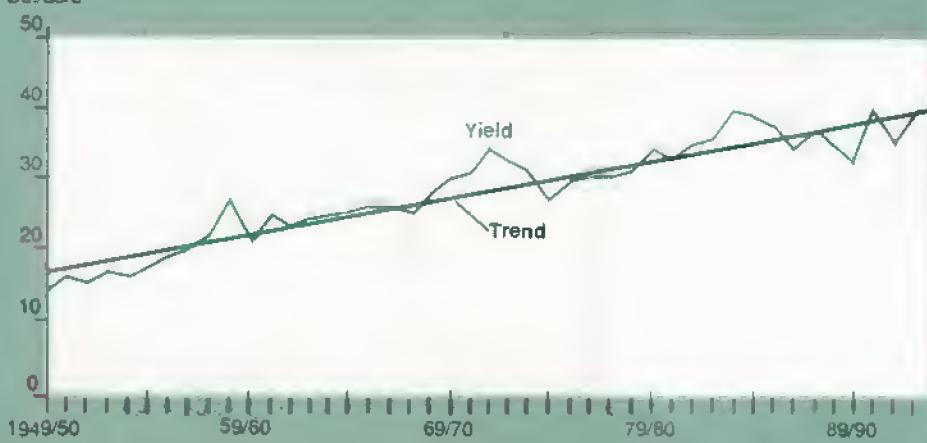
### Wheat Prices Have Declined Since 1950...

\$ (1985)/bu.



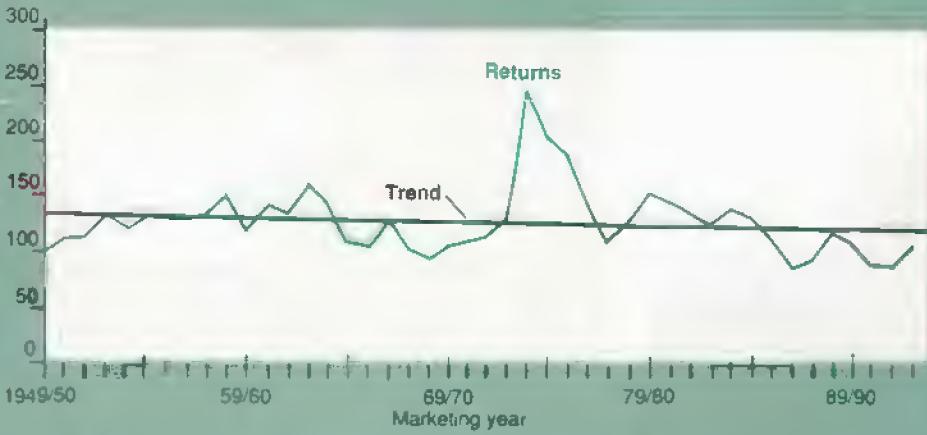
### ... But Yields Have Increased...

Bu./acre



### ... Keeping Returns Generally Steady

\$ (1985)/acre



## Agricultural Economy

- With projected lower ending stocks and higher prices, the soybean export forecast has been lowered 25 million bushels.

### Another Record Wheat Crop

Total wheat production was revised downward from the July forecast, but forecast is for another record year. Changes in the August forecast varied by class, with Durum, White Spring, and White Winter revised upward from July, and Hard Red Spring, Soft Red Winter, and Hard Red Winter lower than the July estimates.

- Average wheat yield projections of 40 bushels per acre are down slightly from the July estimate of 40.5. Harvested acreage predictions were lowered from 64.2 million in July to 63.9 in August.
- Wheat production for 1993/94 is forecast 45 million bushels below the July figure, but the forecast of 2.56 billion bushels is up from the estimated 1992/93 harvest of 2.46.
- Food use projections remained at 845 million bushels, up 15 million bushels from the 1992/93 estimate. The total domestic use forecast was increased from 1.26 to 1.31 billion bushels. Feed and residual use is projected 50 million bushels above the July figure.
- The average wheat price forecast was revised upward by 10 cents per bushel. Average farm price for the 1993/94 season is projected between \$2.55 and \$2.95 per bushel, below the estimated average wheat price of \$3.24 per bushel in 1992/93.
- Spring wheat crop conditions as of August 15 in five major producing states were 54 percent good to excellent, 35 percent fair, and less than 11 percent poor to very poor.
- Exports are projected at 1.15 billion bushels, 50 million bushels below

July, resulting in larger prospective supplies.

### Near-Record Yields For Barley

Despite delayed plantings in the Northern Plains due to a wet spring, barley and oat crops are approaching record yields similar to the 1992/93 harvest. The sorghum yield forecast was revised downward from July projections due to inclement weather in Kansas and Nebraska. A forecast drop from last year's production estimate is due both to declining acreage and lower yields.

- The August barley production forecast was increased to 467 million bushels, higher than estimated production in 1991/92 and 1992/93. The oat production forecast was reduced 13 million bushels from the July estimate, due primarily to lower projected yield.
- The August domestic use forecast for oats was 330 million bushels, down slightly from the July forecast. Domestic use is down 8 percent from the 1992/93 estimate, reflecting a trend of falling domestic oat consumption. Domestic production forecasts remain below domestic use, while imports from Canada and Scandinavia are projected up.
- Sorghum yield for 1993/94 is forecast at 65.9 bushels per acre, down from July's 66 bushels. The 1993/94 production forecast of 642 million bushels is down from last season's estimated production of 884 million bushels.

### Rice Yields Up From July Forecast

The August rice yield forecast for 1993/94 is up from July, but output is forecast below the 1992/93 level. The ending stocks forecast was revised upward from July.

- The forecast for rice yield is 5,713 pounds per acre compared with the

July estimate of 5,657. The long grain rice production forecast was revised upward, while the medium and short grain forecast was reduced. The 1993/94 forecast output of 169.7 million cwt is below the 1992/93 crop of 179.1 million cwt.

- Total use is forecast to reach 180.5 million cwt, up from 176.5 million in 1992/93. Ending stocks were revised upward from 29.9 to 31.5 million cwt.
- Average farm price is expected to range from \$4.75 to \$6.25 per cwt. This reflects a 25-cent increase from the July forecast, but is down from the \$5.93 estimated for 1992/93.

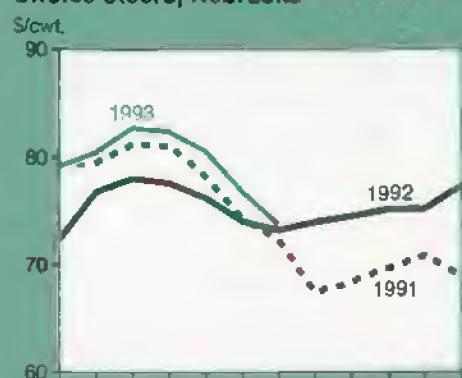
### Cotton Stocks Mount

Favorable growing conditions have contributed to forecast record cotton production in 1993/94. While South Carolina, Georgia, and Alabama cotton yields were adversely affected by abnormally dry weather, the August forecast of overall harvested acreage boosted production nationally.

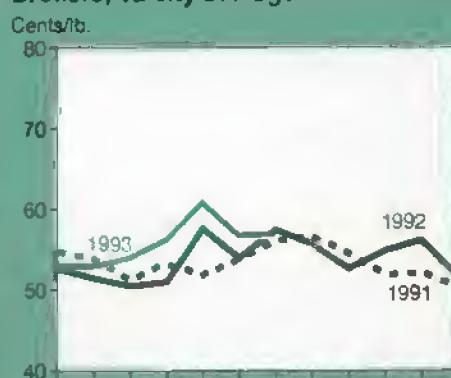
- The August cotton output forecast of 18.5 million bales is up from July's forecast of 17.8 million. A decline in estimated average yield from 680 to 668 pounds due to dry weather in the Southeast was offset by a revision in harvested acres, from 12.56 million in July to an August forecast of 13.32 million.
- Forecast record production pushed the U.S. ending stocks estimate up from 5.8 million bales in July to 6.6 million bales in August, up from 4.6 million in 1992/93. Total use remains at 16.6 million bales.
- Cotton crop conditions were good to excellent for 59 percent of sampled acreage. Thirty-four percent was in fair condition as of August 15. Cotton in Arizona, California, Oklahoma, and Tennessee was in the best condition.

## Commodity Market Prices

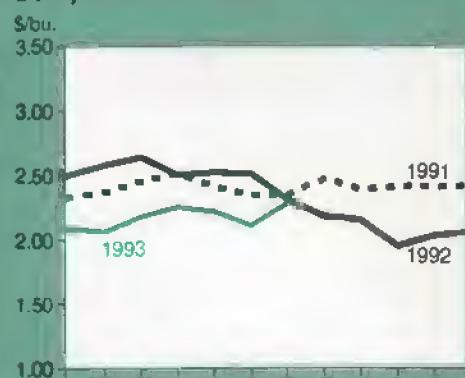
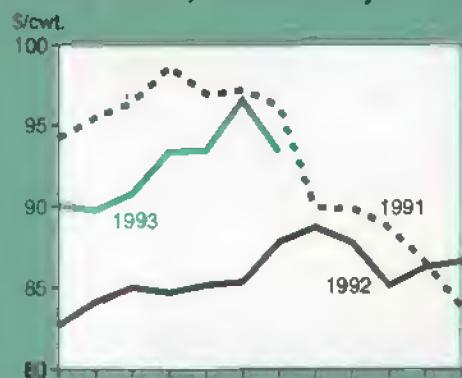
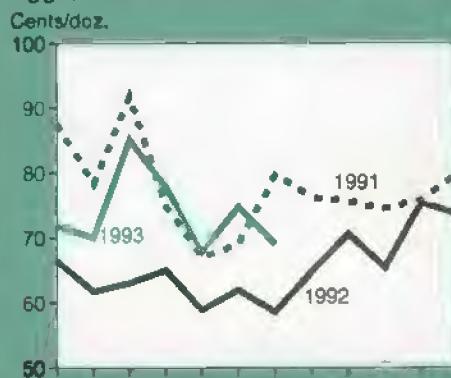
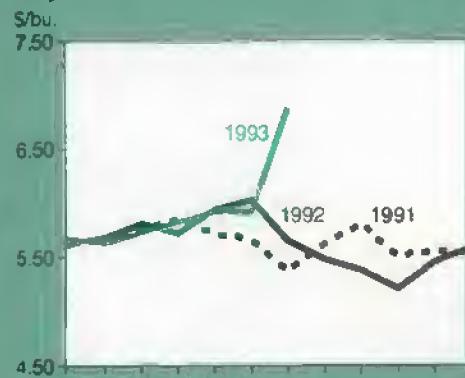
Choice steers, Nebraska



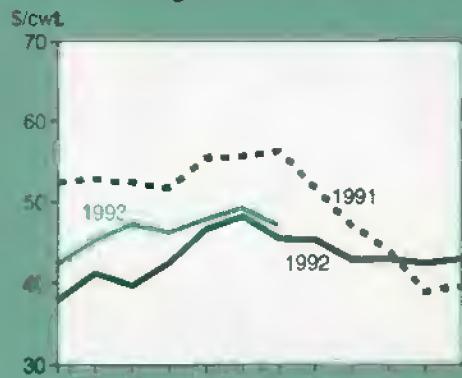
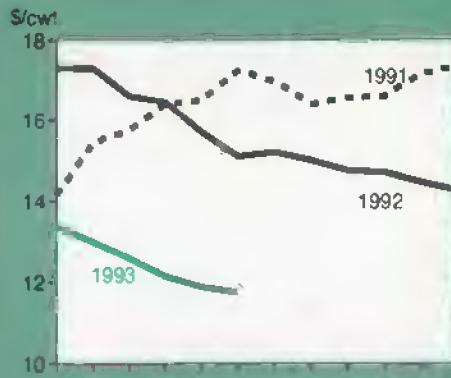
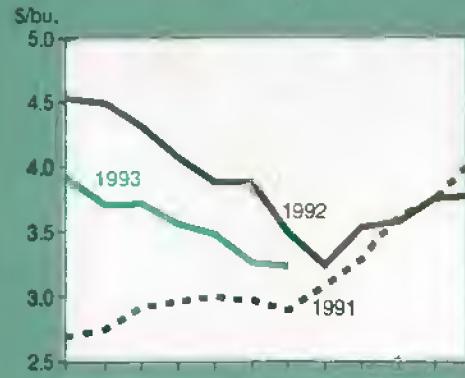
Broilers, 12-city average



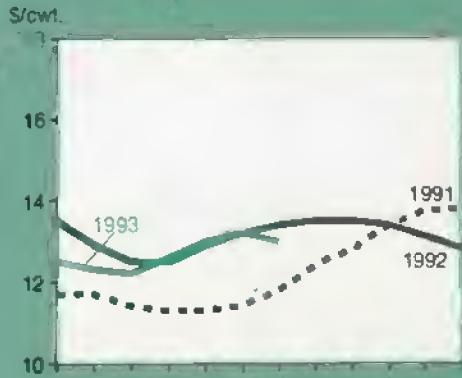
## Agricultural Economy

Corn, Central Illinois<sup>1</sup>Medium steers, Oklahoma City<sup>2</sup>Eggs, New York<sup>3</sup>Soybeans, Central Illinois<sup>4</sup>

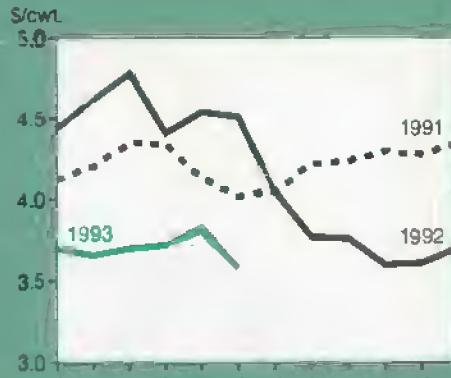
Barrows and gilts, 6 markets, Omaha

Milled rice, SW Louisiana<sup>5</sup>Wheat, Kansas City<sup>6</sup>

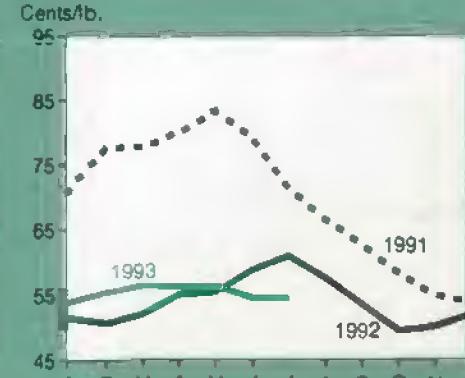
All Milk



Sorghum, Kansas City



Cotton, average spot market

<sup>1</sup>No. 2 yellow. <sup>2</sup>600-700 lbs. medium no.2. <sup>3</sup>Grade A large. <sup>4</sup>No. 1 yellow. <sup>5</sup>U.S. No.2 long-grain. <sup>6</sup>No. 1 HRW.

## Agricultural Economy

### Global Market: Outlook for 1993/94

#### Wheat Imports Shrink Further

Recent favorable weather conditions in both China and Russia are contributing to a forecast increase in 1993/94 world wheat production and are expected to further reduce already low global imports. With imports down, major exporters' sales are forecast down despite large supplies. Competition for the smaller world market will increase and prices are expected to fall.

- U.S. exports are projected down 16 percent to 31 million tons, while exports from Canada and the EC are projected down 13 and 9 percent to 19 million and 20 million.
- World wheat production is projected 2 percent above 1992/93, while imports are expected to drop 6 percent.
- China's imports are projected to match 1992/93's 7 million tons, the lowest since 1985/86. Russia's imports fall to 9.8 million, down nearly a third from 1992/93 and the lowest since 1989/90.

#### World Corn Imports Drop

A substantial decline in world import demand is primarily responsible for a drop in 1993/94 U.S. corn exports. Import demand is forecast to drop sharply in southern Africa and Canada. World barley trade is expected to continue relatively low as import growth slows in Saudi Arabia and Russia. Russia's prospective barley crop has recently increased because of favorable weather. Saudi Arabia has been drawing down large barley stocks and is attempting to encourage domestic production.

- U.S. corn exports drop 10 percent to 38 million tons.
- World corn imports are projected down 7 percent, while barley imports are up 7 percent from 1992/93's low level.
- Saudi Arabia's barley imports are projected at 4 million tons, the same as in 1992/93 and the lowest since 1982/83.

#### Competition Expands Among Rice Exporters

A good monsoon season in south and southeast Asia is keeping projected 1993/94 world rice production relatively high. Projections for India's and Vietnam's crops increased recently. Both

countries are important rice exporters, and India is often an importer as well. However, stagnant world import demand is limiting prospective calendar 1994 gains among all exporters, including the U.S.

- Calendar 1994 global rice trade rises only 1.7 percent.
- U.S. exports are projected at 2.5 million tons, compared with 2.4 million in calendar 1993.
- Vietnam's exports are projected to expand to 2 million tons, up from 1.9 million in 1993.
- Projected record production in India should prevent its need to import in 1994, while it again exports 500,000 tons.

#### World Wheat Output Up, Trade Slows

	Year <sup>1</sup>	Production	Exports <sup>2</sup>	Consumption <sup>3</sup>	Carryover
Million tons					
Wheat	1992/93	558.8	108.8	552.7	132.7
	1993/94	569.5	101.9	566.9	135.2
Corn	1992/93	528.2	60.0	504.9	102.7
	1993/94	477.6	55.9	505.4	74.9
Barley	1992/93	165.3	15.2	166.1	30.0
	1993/94	170.4	16.2	167.5	32.9
Rice	1992/93	350.7	13.4	353.2	52.4
	1993/94	350.0	13.6	356.8	45.6
Oilseeds	1992/93	227.3	38.1	185.3	22.8
	1993/94	226.4	37.6	187.8	20.4
Soybeans	1992/93	116.9	30.5	96.5	20.2
	1993/94	111.8	29.6	96.7	17.0
Soybean meal	1992/93	76.4	27.8	75.6	3.5
	1993/94	76.8	27.8	75.6	3.5
Soybean oil	1992/93	17.2	4.3	17.3	1.9
	1993/94	17.5	4.3	17.5	1.8
Million bales					
Cotton	1992/93	82.5	25.2	85.9	37.8
	1993/94	85.4	26.9	87.1	35.8

<sup>1</sup> Marketing years are: wheat, July-June; coarse grains, October-September; oilseeds, soybeans, meal, and oil, local marketing years except Brazil and Argentina adjusted to October-September trade; cotton, August-July. <sup>2</sup> Rice trade is for the second calendar year. All trade now has been inflated to include trade among the countries of the former Soviet Union. In addition, for the first time, rice trade, like other grain trade, excludes intra-EC trade. Oilseed and cotton trade, however, still include intra-EC trade. <sup>3</sup> Crush only for soybeans and oilseeds.

## Competition Lowers U.S. Soybean Exports

U.S. soybean and soybean meal exports are projected to slip from 1992/93, due to lower 1993/94 U.S. soybean supplies, greater foreign production, and reduced world demand. Higher prices provide incentives for larger South American plantings in October; nevertheless, world soybean production (foreign plus U.S.) is expected to drop. Production of competing oilseeds is up.

World soybean trade is projected down, induced primarily by lower EC soybean and soybean meal demand. EC CAP reforms and higher oilseed prices are expected to raise the price ratio between protein meals and grains, reducing the competitiveness of protein meals in the EC market.

- U.S. 1993/94 soybean exports are projected down 3.3 million tons to 17.8 million, while soybean meal exports drop 0.6 million to 5.2 million. U.S. market share declines to 60 percent for soybeans and 19 percent for soybean meal.
- With increased area, Brazil's anticipated soybean outturn is raised to 22.6 million tons, while Argentina's is still projected at a record 12 million.
- In competition with soybeans, rapeseed exports rise to 4.3 million tons, a 10-percent gain, while sunflowerseed trade reaches 1.6 million tons, up 8 percent.

## Global Cotton Crop Large

World 1993/94 cotton production is still projected above 1992/93. However, concern has developed recently over the possible resurgence of bollworm infestation in China, reducing China's crop expectations and pulling down expected world production growth.

Projected global consumption still exceeds production, and stocks are expected to drop to more normal levels by the end of the season. But much of the growth in consumption is still expected in producing countries, restraining growth of world trade. U.S. exports are projected up somewhat.

- Global cotton production and trade are projected about 3 percent above 1992/93.
- China's expected outturn has been lowered to 19 million bales, 8 percent less than last season.
- U.S. exports are projected at 6.3 million bales compared with 5.2 million in 1992/93.

*[Carol Whilton (202) 219-0824]*

For further information, contact: Sara Schwartz, world wheat; Randy Schnepf, world rice; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; Tom Tice and Jim Cole, domestic feed grains; Nancy Morgan and Jaime Castaneda, world oilseeds; Scott Sanford and George Douvelis, domestic oilseeds; Steve MacDonald, world cotton; Bob Skinner and Les Meyer, domestic cotton. World information (202) 219-0820; domestic (202) 219-0840. AO

## Livestock, Dairy & Poultry Overview

*Competition in the meat sectors will put downward pressure on prices as supplies of red meat and poultry continue to increase in 1993 and 1994. Overall meat supplies are expected to increase at a faster rate in 1994. Total red meat and poultry production is expected to be up nearly 2 percent in 1993 and 3-4 percent in 1994, following 4.5 percent growth in 1992.*

*Large beef supplies are expected through the summer and into the fourth quarter, putting pressure on beef prices. Hog prices are also expected to slide late this summer and early fall as production increases seasonally. Broiler prices continue strong in response to record exports and strong domestic demand.*

*Excessive rains in key growing areas reduced corn and soybean prospects and may increase second-half feed costs. Net returns to red meat and broiler producers, however, are still expected to remain generally positive for all of 1993, with average meat prices unchanged to slightly higher for the year. Egg producers' returns are expected to be strong in 1993 as egg prices continue to average higher than a year earlier throughout the year.*

### Beef Supplies Increasing

Beef output picked up seasonally in summer-quarter 1993 as dressed weights increased dramatically and numbers of fed cattle marketed moved up as well. Year-over-year increases in output are expected to continue through the rest of 1993 and into 1994. Feedlot inventories, which have averaged above year-earlier levels since October 1992, are likely to continue to be up through early 1994. These larger beef supplies have pushed down prices.

## Agricultural Economy

- Third-quarter beef production is expected to average nearly 3 percent above a year earlier, and over 8 percent above the previous quarter. Fourth-quarter output, at 5.85 billion pounds, will increase 3 percent over a year earlier.
- Second-half cow slaughter is expected to increase 2-3 percent over a year earlier. This should reduce some of the tightness in processing beef supplies that has kept prices for lean 90-percent trimmings above \$130 per cwt since early June.
- Seasonally large feedlot placements during June pushed the seven-state July 1 cattle-on-feed inventory up 8 percent from a year earlier to the largest July 1 inventory since 1978.
- Slaughter cattle prices in the Central Plains declined \$4 per cwt during July, averaging \$72-\$73 for the month. While prices regained much of the decline during August, some downside price risk remains.

- Retail beef prices dropped 6 cents per pound in June from their May peak, and are expected to continue declining into late summer.

Feeder cattle supplies outside feedlots on July 1 were unchanged from a year earlier despite increased numbers in feedlots. A larger proportion of these feeder cattle are lightweight calves, with heavier stocker cattle numbers down from a year earlier. The short-term supply tightness for stocker cattle has supported prices despite recent declines in fed cattle prices and increases in feed grain prices.

- Numbers of heavier stocker cattle were down about 2 percent from 1992.
- The 1993 calf crop, at 40.1 million head, is estimated up 1 percent from last year.
- Stocker cattle prices have held at close to \$90 per cwt since late spring.

A modest expansion of the U.S. beef herds has been underway since 1989.

It is expected to continue over the next several years, although at a slower pace than previous expansions. A larger beef cow inventory and more beef heifers being held for future herd replacement accounted for the increase in total cattle numbers. Some of these heifers likely replaced older cows culled from herds, as beef cow slaughter has been higher in the first half of 1993 than a year earlier.

- The July 1 U.S. cattle inventory rose 1 percent from a year earlier to 110.6 million head.
- Beef cow inventories, at 34 million on July 1, are the largest on this date since 1974. Beef cow numbers have increased by 1 million head over the past 2 years.
- The number of beef heifers calving and entering herds during the first half of 1993 was up nearly 30 percent from a year earlier and was the largest since numbers first became available in 1984.

### U.S. Livestock and Poultry Products—Market Outlook at a Glance

	Beginning stocks	Production	Imports	Total supply	Exports	Ending stocks	Consumption		Primary market price	
							Total	Per capita		
— — — — — Million lbs — — — — —										
Beef	1993	360	23,166	2,395	25,921	1,300	350	24,271	65.8	75.78
	1994	350	23,918	2,370	26,638	1,400	350	24,888	66.9	71.77
— — — — — Million lbs — — — — —										
Pork	1993	385	17,307	680	18,372	405	385	17,582	52.9	44.47
	1994	385	17,824	680	18,889	425	375	18,089	53.9	41.47
— — — — — \$/lb — — — — —										
Broilers	1993	33	22,024	0	22,057	1,740	33	20,284	69.1	52.55
	1994	33	23,089	0	23,122	1,830	33	21,259	71.7	50.56
— — — — — \$/lb — — — — —										
Turkeys	1993	272	4,844	0	5,116	187	260	4,669	18.1	59.62
	1994	260	4,922	0	5,182	202	275	4,705	18.1	57.63
— — — — — Million doz. — — — — —										
Eggs*	1993	13.5	5,933.8	5.0	5,952.3	154.0	12.0	5,028.6	233.8	73.78
	1994	12.0	5,990.0	4.5	6,006.5	157.0	12.0	5,057.5	232.9	67.73

Based on August 11, 1993 World Agricultural Supply and Demand Estimates. 1993 estimates. 1994 projections

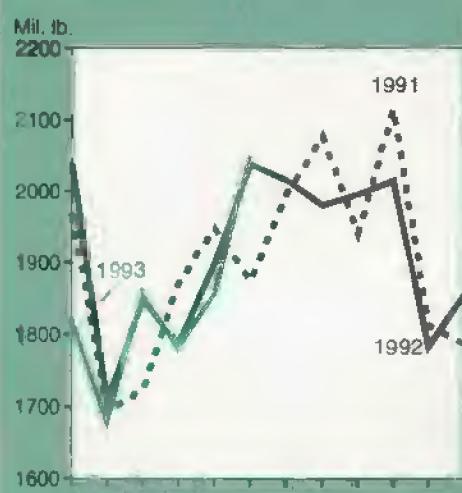
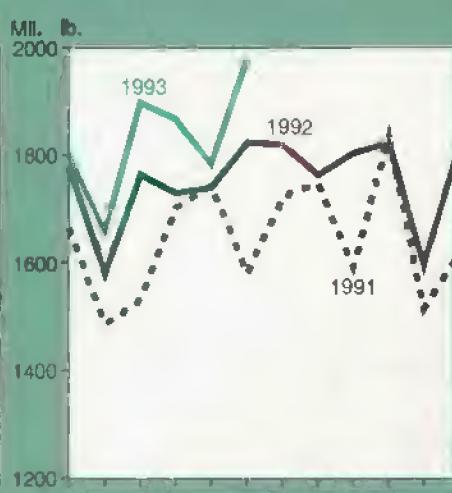
\*Total consumption does not include eggs used for hatching.

See tables 10 and 11 for complete definition of terms.

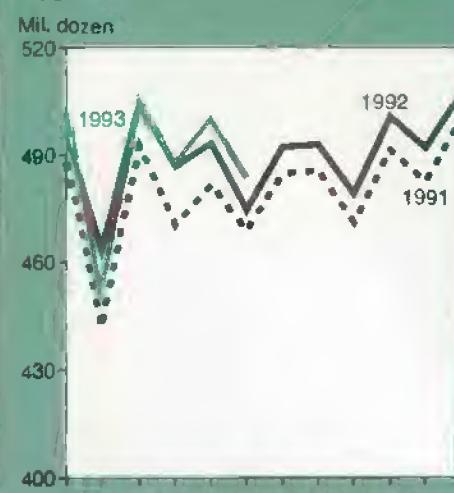
## Livestock &amp; Product Output

## Agricultural Economy

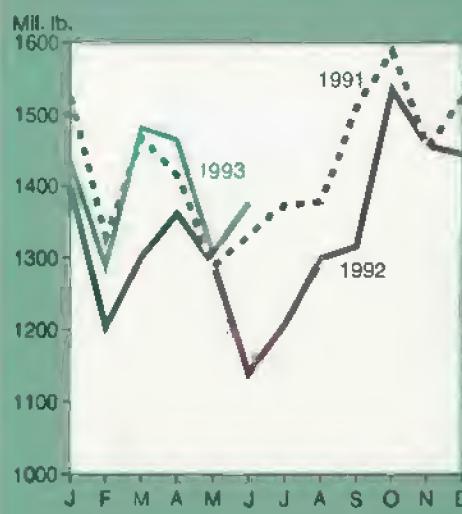
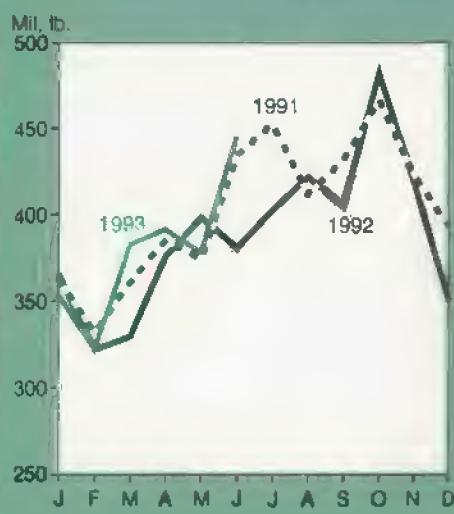
## Commercial beef

Broilers<sup>1</sup>

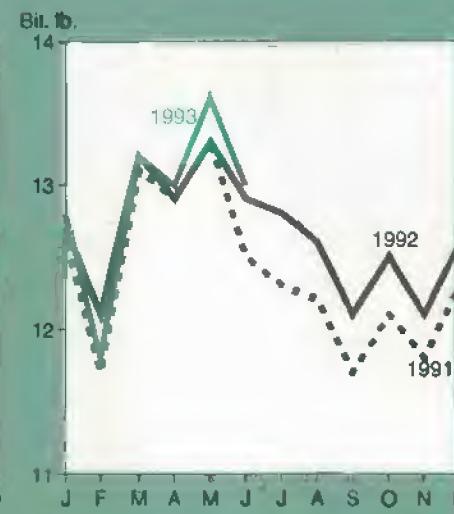
## Eggs



## Commercial pork

Turkeys<sup>1</sup>

## Milk



<sup>1</sup>Federal inspection production, ready-to-cook.

## Record Pork Output In 1993, 1994

Based on the June 1 inventory of market hogs as well as farrowing intentions for June-November, quarterly pork production will increase compared with a year earlier, at least through mid-1994, pushing annual output to record highs in 1993 and 1994. Hog prices are expected to slide in late summer and early fall 1993 as production increases seasonally.

Producers' returns, generally favorable during the first half of 1993, may tighten in the second half with hog prices expected to decline and feed costs to in-

crease. The decline in net returns, however, is not expected to lead to any significant herd liquidation. Retail pork prices are projected to rise slightly in the second half of 1993 and in 1994.

- Commercial pork production in 1994 is projected to reach 17.8 billion pounds, the third consecutive record high. Year-over-year increases are expected to be larger in the first half than in the second.
- Hog prices dropped \$1-\$2 per cwt in summer 1993 from the spring quarter. Although net returns will tighten, especially if feed costs rise, returns are likely to remain above

cash costs. Lower returns may set the stage for reduced pork production in 1995.

- Barrow and gilt prices in 1994 are expected to average about \$2 per cwt lower than 1993's \$44-\$47. The lowest 1994 prices are expected in the first quarter.
- Retail prices are expected to rise 1 percent in the second half of 1993 and to rise 1-3 percent in 1994.
- Pork exports in 1994 are projected to rise about 5 percent from 1993, and imports will remain about the same.

## Agricultural Economy

### ***Broiler Producers Face Higher Feed Costs***

Adverse weather in the Midwest and Southeast has clouded the net return outlook for broilers for the second half of 1993 and the first half of 1994. Still, broiler production for 1993 will continue to grow briskly. Overall net returns for 1993 are expected to be positive, reflecting strong retail and food-service demand, record exports, and, for the first half of the year, lower feed costs.

Feed costs are expected to increase in 1994. However, broiler producers who forward contracted feed or who had ample feed supplies in nearby storage may not face increased feed costs. Also, availability of alternative feed substitutes for part of the rations may moderate feed cost increases.

Strong export and domestic demand kept wholesale prices for broilers above a year ago for the first half of 1993, even with sharply increased broiler production. Second-half broiler prices, however, may average about the same as a year earlier.

- Broiler production is forecast to expand about 5 percent in 1993 and 1994.
- Production in the third quarter of 1993 is increasing nearly 6 percent, based on a hatch of more than 4 percent higher, and 1-percent-heavier average slaughter weights. Production in the fourth quarter is expected to increase around 4-5 percent.
- Net returns in the second half of 1993 are expected to be 6-8 cents per pound on a whole-bird basis, compared with 8.2 cents in 1992.
- Wholesale prices for whole birds are expected to average in the mid-50's in 1993 and the low 50's in 1994, compared with 52.6 cents per pound in 1992. Third-quarter 1993 wholesale prices are expected in the mid-50's, about the same as a year earlier. Prices are expected to decline to the low 50's in the fourth quarter.

### ***Record Broiler Exports In 1993, 1994***

Exports have become increasingly important to the U.S. broiler industry in recent years, a fact reflected in their growing share of total domestic production. During 1993, exports are estimated to represent about 8 percent of production, up from less than 5 percent in 1989.

U.S. broiler exports are expected to continue increasing to record-setting levels in 1993 and 1994. Exports are estimated to reach 1.7-1.8 billion pounds in 1993, up 15-20 percent from a year ago. For 1994, exports are projected to increase to 1.8-1.9 billion pounds.

U.S. broiler exports to most major markets, with the exception of Japan, are expected to be higher in 1993. Exports to Japan are estimated at about 220 million pounds in 1993, down nearly 16 percent from 1992. Despite lower sales, U.S. market share in Japan has increased so far in 1993, and has surpassed Thailand's share.

But U.S. broilers have lost market share in Japan in recent years, falling from 44 percent in 1988 to only 29 percent in 1992. Japan's broiler purchases have been shifting from bone-in leg parts, the product that constitutes over 90 percent of all U.S. broiler exports, to further processed broiler products. Broiler processors in Thailand, Brazil, and China—some with Japanese ownership or investment—have benefited from lower labor costs and were able to supply deboned leg parts at below U.S. prices.

### ***Hong Kong Is Top Market***

In 1992, Hong Kong surpassed Japan as the largest market for U.S. broiler exports. Hong Kong's poultry meat imports have been growing dramatically. U.S. broiler exports to Hong Kong are expected to increase 20 percent in 1993, following 45-percent growth in 1992 and 30 percent in 1991. The U.S. supplies the largest

share of Hong Kong's poultry imports, 63 percent in 1992. Brazil, the EC, Japan, and China are other important suppliers.

Broiler production in Hong Kong is falling, making up only about 8 percent of domestic consumption this year. The Hong Kong government is instituting antipollution measures which are making production uneconomical for many producers. Yet per capita broiler meat consumption is high—78 pounds per year, ready-to-cook basis, in 1992, compared with 76 in the U.S.—and is growing steadily. Despite a decrease in production, exports from Hong Kong are growing and equal about 40 percent of poultry imports. Most of the exports are destined for China.

Canada's imports of broiler meat in 1993 will likely be about the same as in 1992. Canada has retained domestic production and global import quotas on poultry under the U.S.-Canada Free Trade Agreement (CFTA). The import quota for chicken meat is set at 7.5 percent of the previous year's production. When shortages occur, the government grants supplementary import quotas, and in 1992, many supplementary quotas were granted, boosting imports.

Canada's domestic production quota was raised about 5 percent in 1993, which is expected to restrain import increases this year. Even as the volume of Canada's broiler imports holds steady in 1993, Canada will likely remain at least the third-largest, and possibly the second-largest market for U.S. broilers in terms of value.

### ***Outlook for 1994***

In 1994, further growth is expected in U.S. broiler exports to most major markets, including the Pacific area, the Middle East, some European countries, Canada, the Caribbean countries, and Mexico. Sales to the former Soviet Union (FSU) remain clouded by financing problems, and may decline in 1994. Most exports to the

## Agricultural Economy

FSU are currently assisted with export credit guarantees and food aid.

Although U.S. broiler exports include many further processed products, the driving force behind U.S. export growth continues to be the steady availability of large supplies of chicken-leg parts at competitive prices as broiler production grows year after year. While Export Enhancement Program (EEP) sales of whole broilers remain important in competing with subsidized European Community (EC) whole-bird exports to the Middle East, Singapore, and Egypt, EEP sales are not expected to play a major role in the growth of U.S. broiler exports.

Competitors, led by France, Brazil, Thailand, and China, are also increasing broiler exports, and will continue to compete with the U.S. in world poultry meat markets. Exports have been an important objective of France's broiler industry for some time and are assisted by EC export subsidies. During 1993, France's broiler exports are estimated at 970 million pounds, accounting for about 37 percent of its production. In 1994,

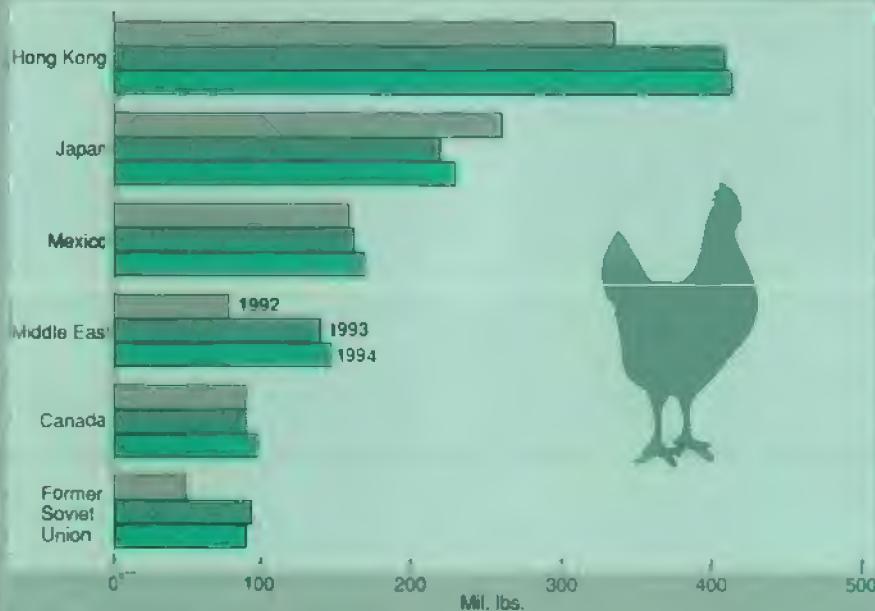
France probably will increase exports as will the other leading exporters.

Trade barriers are restraining export growth. Poultry producers in some importing countries have been able to obtain protection, keeping cheaper imported U.S. poultry from consumers. For example, U.S. exports to Central America are down so far this year, and protectionist activity has played a role. In Guatemala, an increase in imports of U.S. poultry in 1992 led to a 45-percent tariff on poultry meat imports exceeding 660,000 pounds per month.

Some countries ban imports of U.S. poultry completely. Others require importers to obtain government approval before poultry can be imported. Some set high import tariffs to make imports uneconomical. In Poland, large purchases of U.S. chicken parts starting in 1992 and continuing in 1993, resulted in a substantial increase in import taxes. The duty is 30 percent plus a value-added tax. Yet, imports continued to grow rapidly through May, and additional measures have been called for by Polish trade groups.

*[Larry Witucki (202) 219-0766]*

#### U.S. Broiler Exports To Increase In Most Major Markets



- Retail prices for whole broilers are expected to remain stable for the remainder of 1993, averaging 87-89 cents per pound, only slightly above last year.

#### Egg Prices Sharply Higher

Lower per capita supplies of table eggs are boosting egg prices and aiding net returns in 1993. Egg production increases are expected in second-half 1993, with hatching eggs accounting for most of the growth. Hatching-egg increases are being driven by increasing broiler production and the need for additional replacements for the relatively old laying flock.

- New York wholesale egg prices are likely to average in the mid-70's per dozen in the third and fourth quarters in 1993, compared with 65 and 71 cents in 1992. Prices are expected to average 73-76 cents per dozen for 1993 and near 70 cents for 1994.
- Retail prices in third-quarter 1993 are expected to be in the low 90's, compared with 84 cents per dozen in 1992. The projected annual retail price for 1993 is 92-94 cents per dozen, 8 percent higher than 1992.
- Net returns averaged nearly 12 cents per dozen for the first half of 1993 due to high egg prices and lower feed costs. Strong net returns expected this year are likely to boost egg production about 1 percent in 1994.
- Total egg production is expected to increase more than 1 percent in the second half of 1993, with a 1-percent increase in table-egg production and a 4-percent increase in hatching eggs.

## Agricultural Economy

- The table-egg production flock, at 235 million hens on July 1, is 2 percent larger in 1993 than in 1992. With 2 percent more chicks hatched than last year for January through June, the total flock should continue larger this year.

Egg exports in 1993 are expected to be slightly lower than last year, reflecting a sharp drop in egg product sales to Japan early in the year. The decline in egg product exports to Japan was partially offset by a sharp increase to Mexico, which displaced Canada as the second leading buyer of U.S. egg products.

With relatively high shell-egg prices during the first quarter, fewer eggs were broken for egg products, which accounted for about a third of the value of U.S. egg exports. But supplies of egg products increased in the second quarter and are expected to gain in the third as well, reducing prices and strengthening the competitiveness of U.S. exports.

- Ten percent fewer eggs were broken for egg products during the first quarter of 1993. But declining egg product stocks brought breakers back into the market after Easter, and 5 percent more eggs were allotted to processing during the second quarter, compared with last year.
- Egg product sales to Japan fell 35 percent during the first 5 months of 1993. Despite the reduction, Japan accounted for nearly 60 percent of U.S. egg product exports.
- Egg exports in 1993 are expected to total 154 million dozen, shell equivalent, down from 157 million dozen in 1992.

### Dairy Demand Sluggish

A large sale of nonfat dry milk to Algeria, aided by the Dairy Export Incentive Program (DEIP), failed to slow the gradual downward drift of U.S. milk prices.

U.S. supplies of nonfat dry milk have been more than adequate, due to heavy output and collapsing domestic use. Small price support purchases of nonfat dry milk have been made after the July 7 increase in the support purchase price.

- On July 13 and 14, the Commodity Credit Corporation (CCC) approved export subsidies through the DEIP that will move 20,000 metric tons of nonfat dry milk to Algeria between August and November 1993. The size of the sale to Algeria matches 1993's previously largest sale of 20,000 tons of nonfat dry milk to Mexico.
- Additional export credits to Algeria for dairy products amounting to \$50 million were approved on June 23 under CCC's GSM-102 program, an increase bringing Algeria's total credit eligibility to \$130 million in 1993. Algeria still has export credit allocations for fiscal 1993 to purchase additional nonfat dry milk, dry whole milk, and butteroil.
- Nonfat dry milk prices dropped 3 cents per pound from early May to late July.
- With slow domestic demand for skim solids, nonfat dry milk prices may not be far above the support price for the balance of 1993.

For further information, contact: Richard Stillman and Agnes Perez, coordinators; Steve Reed, cattle; Leland Southard, hogs; Lee Christensen, Larry Witucki, and Milton Madison, poultry; Jim Miller and Sara Short, dairy. All are at (202) 219-1285. AO

## Specialty Crops Overview

*Output of processing tomatoes, grown mostly in California, and acreage of cucumbers for pickles, are expected to increase in 1993. Adverse weather during the spring and early summer, however, cut prospects for several major U.S. processed vegetables in the upper Midwest and in the Middle Atlantic states. Flue-cured tobacco production, down from last year due to disease problems and slightly lower acreage, was further reduced by drought in the Southeast.*

### Processed Vegetable Yields Down in Midwest

Cool, wet conditions in the Midwest and drought in the Middle Atlantic states disrupted planting and are expected to reduce yields of green peas, snap beans, and sweet corn intended for processing. The expected smaller supply of canned and frozen vegetables will likely boost wholesale prices for some items during the 1993/94 marketing season. Green peas, snap beans, and sweet corn accounted for about 36 percent of U.S. value for 13 principal processed vegetables in 1992.

Production of processing tomatoes, however, is projected to increase in 1993 from 1992's low level. Contracted acreage of cucumbers for pickles has been boosted by substantial increases in California and North Carolina. Michigan and North Carolina are the largest producers of cucumbers for pickles.

- Green pea production, at 369,430 tons, is forecast down 35 percent from last year. Excessive rains reduced plantings and cut yields in Minnesota and Wisconsin, while dry conditions reduced output in the Middle Atlantic states. Wisconsin

and Minnesota grow the largest acreages of green peas. Processors' list prices increased 5-20 percent for frozen and canned peas during July.

- Processors contracted 197,170 acres of snap beans for harvest in 1993, down 2 percent from 1992. Excessive rain and cool temperatures early in the season hurt the Midwest crop. Wisconsin has the largest snap bean acreage.
- Processors reduced contracted acreage of sweet corn by 9 percent from last year. Acreage for both canning and freezing are down. Wet conditions prevented planting the intended acreage in Minnesota and Wisconsin, which together grew over half of the U.S. sweet corn for processing in 1992. List prices for frozen and canned corn increased 5-10 percent during July. Total production will depend on growing conditions in these states during August and September.
- Pickle processors contracted 5 percent more acreage of cucumbers than last year. Although wet fields disrupted planting and cool spring temperatures slowed growth in Michigan, recent warm weather and abundant moisture have provided good conditions for Michigan's crop. North Carolina boosted contracted acreage by 14 percent from 1992, while Michigan's acreage is down 5 percent.
- Tomato acreage for processing is forecast up 15 percent in 1993 from 1992, and production is forecast at 9.82 million tons, up 14 percent. Output was down 20 percent in 1992 from the year before because of large stocks and depressed prices. Processors are quoting prices 20-25 percent higher than a year ago as the industry works off excess stocks. California produced 90 percent of U.S. processing tomatoes in 1992.

## Vegetables for Processing

In contrast with fresh-market vegetables, most vegetables grown for processing are produced under contracts between growers and processing firms. Before planting, processors and growers agree on the quantity, price, and terms of delivery of the vegetable to be produced, with processors in some cases supplying inputs.

The varieties of vegetables are developed to meet specific requirements of the processing or the fresh market. Harvesting methods often differ, with most processing vegetables being machine harvested while vegetables for fresh use are largely hand harvested. Prices for fresh vegetables are generally higher and more variable because of variations in supply associated largely with weather. Once processed, vegetables can be marketed in a more directed fashion, with less price variability.

**U.S. exports of processed vegetables (6 percent of supply) exceed imports (3 percent of supply), while the U.S. is generally a net importer of fresh vegetables (imports are about 10 percent of supply). Japan and Canada are major export markets for U.S. processed vegetables.**

California and Florida are well known as the top suppliers of the nation's fresh vegetables. Although California is also the leading producer of processing vegetables—particularly tomatoes for canning and broccoli and cauliflower for freezing—Wisconsin, Minnesota, Washington, and Oregon round out the top five states in production of processing vegetables (excluding potatoes). Excluding tomatoes and potatoes, these are the top four processing vegetable states.

Tomatoes are the major U.S. processing vegetable in both production and per capita use. On a fresh-equivalent basis, per capita use of processing tomatoes (72 pounds) dwarfs that of fresh tomatoes (16 pounds). But use of processed tomato products has been trending upward.

California produces over 90 percent of the tomatoes for processing and manufactures most of the sauces, paste, puree, and catsup sold in retail and food-service establishments. The U.S. is the world's largest producer of tomatoes, accounting for 16 percent of the world total.

In terms of acreage, sweet corn is the leading processing vegetable, accounting for one-third of all processing vegetable area (excluding potatoes). Wisconsin and Minnesota each account for about a fourth of the U.S. sweet corn crop. These states produce most of the sweet corn destined for canning and a growing share of the sweet corn for freezing. Washington, which accounts for 16 percent of the crop, and Oregon, 12 percent, produce sweet corn mainly for freezing. Per capita use of processing sweet corn is about 21 pounds (fresh-weight equivalent), about the same as in 1970. While use of corn for canning has declined to 12 pounds per person, freezing use has expanded.

Green peas for processing account for about a fifth of U.S. processing vegetable area, with Wisconsin and Minnesota each generating about a fourth of the U.S. green pea production. These two states produce primarily for the canning market while Washington, which averages 18 percent of the crop, and Oregon, 9 percent, produce mostly for freezing. Per capita use of processing green peas is 4 pounds and is equally distributed between canned and frozen.

Snap beans rank fourth in processing vegetable area, following corn, green peas, and tomatoes. Wisconsin, with one-third of the crop, and Oregon, one-fifth, are the leading states in acreage of snap beans for processing. Michigan and New York follow, each accounting for about 10 percent of the crop. Per capita use of processing snap beans is 6 pounds, with canning steady at 4 pounds.

*(Gary Lucier (202) 219-0884)*

## Agricultural Economy

### ***Smaller Crops of Fruits for Canning***

Reduced production of processed apricots, peaches, and pears are expected to keep prices firm during the 1993/94 marketing season. Tart cherry production, however, is expected to exceed its 1988-92 average, holding down prices that have already dropped because of large beginning stocks.

- USDA forecasts California's cling peach production at 1,140 million pounds, 4 percent lower than in 1992. Large canner inventories, however, are expected to dampen canned peach prices. The growers' negotiated price is down about 9 percent from 1992. Cling peaches are used mostly for processing.
- California's production of freestone peaches is forecast 2 percent lower than 1992, but up nearly 8 percent from the 1988-92 average. One-third of California's freestone peaches went for processing in 1992, and California accounted for 96 percent of U.S. processed peach output in 1992.
- Bartlett pear production is forecast down 2 percent in 1993. About three-quarters of Bartlett production is typically used in processing. The major Bartlett growing areas are California, Oregon, and Washington.
- USDA forecasts apricot production down 10 percent in 1993, with fruit not sizing as well as expected. About 80 percent of apricot production is usually processed. Wholesale canned apricot prices are expected higher due to the smaller crop. California is the major apricot producer.
- Tart cherry production is forecast 2 percent less than in 1992, but 33 percent larger than the 1988-92 average. Michigan, the major producer of tart cherries, expects an 11-percent-larger crop, more than twice its

small 1991 output. List prices for frozen cherries in Michigan are down about 25 percent from a year earlier because of larger stocks going into the 1993/94 season.

### ***Weather Conditions*** ***Lower Tobacco Output***

Production of both flue-cured and burley tobacco in 1993 is forecast lower than last season. Excess moisture early in the growing season, which caused disease problems, and hot dry weather later in the season are expected to lower tobacco yields. Early-season flue-cured prices are higher than last season, and the season average is expected to be above last year. Demand is expected to be strong due to recent legislation requiring 75 percent domestic leaf content in U.S.-manufactured cigarettes.

- USDA estimates flue-cured production at 835 million pounds, down 4 percent from a month ago and 8 percent below last year. Flue-cured acreage is down slightly from last year.
- Burley tobacco production for 1993 is estimated at 618 million pounds, down 14 percent from last year.
- Grower prices for flue-cured tobacco in the 1993/94 marketing season (July to June) are expected to average slightly higher than last year. Auction prices for flue-cured have been running about 6 cents higher than a year earlier.

### ***Sugar Acreage Up Slightly***

USDA estimates slightly more acreage of sugar crops for harvest during 1993/94. Sugar production, however, is expected to be smaller than last season. Domestic sugar prices strengthened following imposition of marketing quotas on June 30. Disruptions to normal marketing activity caused by flooding in the Midwest may also have contributed to the price surge in beet sugar prices.

- USDA estimates acreage of sugar crops for harvest at 2.29 million acres in 1993/94, up marginally from last season. Sugarcane acreage is projected to rise slightly, but sugarbeet acreage is expected to fall due mostly to less acreage in California.
- Florida's sugarcane acreage (excluding acreage for seed), is projected at 435,000, up 2.1 percent from 1992. Acreage in Louisiana is expected to be unchanged at 345,000. Hawaii's acreage is up slightly due to the reactivation of a raw sugarcane mill.
- U.S. acreage of sugarbeets is projected to fall slightly in 1993 to 1.41 million acres. The biggest changes will likely be in California, down 10 percent, and in Minnesota and Michigan, up 1 and 6 percent.
- USDA forecasts 1993/94 total sugar production at 7.55 million short tons, raw value, 200,000 tons less than in 1992/93. The decrease from last year is mostly the result of lower beet sugar recovery in the upper Midwest, compared with near-record sugar yields in 1992/93. Losses caused by flooding in Minnesota dropped projected beet sugar output 50,000 tons from the projection of a month earlier.
- U.S. raw sugar prices inched up about one-half cent per pound in July following imposition of domestic sugar marketing allotments on June 30; refined beet sugar prices rose nearly 4 cents.

*(Glenn Zepp (202) 219-0888)*

**For further information, contact:**  
Dennis Shields and Diane Bertelsen, fruit and tree nuts; Gary Lucier, vegetables; Peter Buzzanell, sweeteners; Doyle Johnson, greenhouse/nursery; Verner Grise, tobacco (202) 219-0883. David Harvey, aquaculture; Lewrene Glaser, industrial crops (202) 219-0085. **AO**

## Commodity Spotlight



U.S. Forest Service

# Forest Products: Recycling for New Markets

**A** growing interest in conserving forest resources and reducing solid waste is speeding the development of products that use more recycled paper and wood and less virgin timber. A host of packaging, housing, and other materials on the market or in the wings reflect increased public and private research on recycling as well as recent technological advances.

Wastepaper recycling is expected to accelerate through the end of the decade, and the use of recycled wastepaper as a fiber input for production of paper and board is expected to continue growing. The re-use of waste wood has been less common, but research and commercialization efforts in this area are increasing. USDA's Forest Service, for example, recently initiated a program to design and provide technologies that could dramatically increase the use of wood and fiber waste for housing construction by the

end of the decade. These efforts are aimed at creating new jobs as well as lowering the environmental impacts of construction.

Wood composites which reduce the need for old-growth wood and in some cases improve on the performance and design characteristics of solid wood products, are beginning to incorporate recycled materials. Fabricating construction products from recycled wood fibers generally requires less energy than comparable products from metal, plastics, and concrete. These new materials, like recycled paper, are also reducing pressure on landfills.

### *Developing Markets For Recycled Paper*

In tandem with world production, the U.S. pulp and paper industry has grown about 3 percent per year in recent decades and is likely to continue to grow at about that rate for the next decade. Competition in world markets is likely to increase as pulp output rises in Brazil and other Latin American countries and, in the future, Siberia. For the next several years, recycling is likely to supply the paper for most of the increase in domestic production.

Since the late 1980's, concerns about the volume of solid waste, the problems of disposal, and the environment have promoted recovery of increasing amounts of wastepaper for recycling. The amount of wastepaper recovered has risen in the last 10 years from 26 percent to 38 percent and is expected to reach 45 percent or more. The paper industry has instituted a program of recycling to increase the utilization of wastepaper, and most new mills added since 1992 use recycled fibers as a major input for papermaking.

Wastepaper supplies are centered in metropolitan areas, which may be far from existing mills in forest areas. As a result, prices for wastepaper, such as old newsprint, have declined and even become negative in some cities in the Northeast. To foster markets for recycled materials, many local governments have passed rules on mandatory recycled paper content for specific types of paper they use.

In addition, voluntary use of recycled products by large corporations such as McDonald's, and mandated procurement policies by Federal and state government agencies, have helped expand the use of recycled products.

The development of improved recycling technology is also expected to help expand the market for recycled paper. USDA's Forest Products Laboratory in Madison, Wisconsin, for example, is improving technology for de-inking and removing contaminants from recycled paper, fiber bonding in recycled papers, bleaching of recycled fibers, and transforming the structure of recycled fibers. New designs for paper pulpers, improved washing equipment, bleaching systems, and other innovations are beginning to result from this research, making recycled paper products more attractive and less costly.

### *New Technologies For Housing Components*

Reduced inventories of old-growth forests and heightened environmental concerns about maintaining ecosystems has resulted in the reduction of traditional sources for lumber and plywood in the Western U.S. and Canada. For example, harvests from Federal forest lands dropped about 75 percent between 1988 and 1992, and are expected to remain depressed.

While the forest industry has increased production in the Southern U.S., the growing demand for forest products has pushed up timber prices and generated concern about the long-term availability of timber. Much of the timber market impacts from accelerated recycling of wastepaper in the 1990's will be in the South, where more than half the U.S. pulp, paper, and paperboard is produced.

Great potential exists for developing homebuilding materials from recycled wood waste and from wastepaper. Wastepaper is the single largest component of municipal solid waste (MSW). At approximately 73 million tons per year, wastepaper accounts for 38 percent of all landfilled material. Wood waste

## Commodity Spotlight

### A Home for Recycled Materials

Solid wood and marble were king and queen of building materials in the past, but recycled wood products and composites could be the wave of the future. While new home construction, repairs, and alterations—which account for over 65 percent of timber products use—still depend mostly on harvested timber, the technology to incorporate recycled materials is under development.

USDA's Forest Service recently initiated a research program aimed at developing technologies to create housing components from recycled materials. The goal is to provide technologies that will permit the use of material recovered from the municipal solid waste stream in 20 percent of housing components by the year 2000. This would create markets for up to an additional 7 million tons of wastepaper and wood waste now going to landfills.

The Forest Service has designed a model home which illustrates potential applications for these technologies. Every component of the model home—from the foundation to the roof—would incorporate recycled materials.

**Roof systems.** Roof system components include reconstituted wood particles in sheathing, trusses, and rafters; a sandwich panel made of recycled paper fiber; and concrete tiles with recovered materials as aggregate. The use of recovered materials in roof system components could reduce virgin wood fiber use in roof systems to 40 percent of present demands.

**Exterior walls and siding.** Structural systems for exterior walls include I-shaped columns and composite sheathing panels that use recovered wood and recycled fiber sandwich panels. These systems can be made using 35 percent of the virgin wood fiber presently used.

**Interior walls.** Interior walls in the model home have "studs" made only from recovered materials, which feature extruded wood/plastic composite lumber.

**Floor systems.** The model home's floors use I-beam joists made from recycled fiber materials in the webs and virgin wood or laminated veneer in the top and bottom flanges. Virgin fiber use is 40 percent or less than what might have been used with solid wood joists.

**Foundation.** Components of the model home's Permanent Wood Foundation system include particleboard and composite lumber made from treated waste wood. Treated wood can also be made into lightweight, high-strength, wood cement composite blocks.

**Woodwork and finished components.** Decorative countertops and cabinets, for example, can be fabricated from paneling made with construction wood waste, mixed wastepaper, and mixed waste plastic.

*(Howard Rosen (202) 205-1565)*

other than paper comprises about 6 percent of landfilled material. According to the U.S. Environmental Protection Agency, 8.7 million tons of wood waste will enter the municipal solid waste stream each year until the turn of the century.

The types of wood waste, besides wastepaper, with potential for use in housing products, include intact used lumber salvaged from razed buildings, wood broken up during building demolition, old wood pallets, scrap wood from new construction sites (e.g., forms and scaffolding), preservative-treated wood waste from treating facilities and building construction, old wood utility poles and railroad ties, and wood fibers in paper-mill sludge. Most of these raw

materials will require chipping, grinding, or fiberizing to turn nonuniform waste into a uniform material for processing.

The products of technologies with the greatest potential for success include dry-formed reconstituted wood materials from fibers, flakes, chips, or particles; wood/plastic combinations; wood/cement combinations; wet-formed wood materials from fibers; old lumber recycled from razed buildings; and lumber remanufactured from short pieces of construction waste.

A particularly promising process involves crushing wood into splinters. This procedure has advantages over other wood reduction techniques since no cut-

ting is required, eliminating the need to sharpen blades and the risk of damage by contaminants. Because splinters have high length-to-cross-section ratios, they make strong composites. Dry hardwoods splinter exceptionally well, so this technology seems like a natural outlet for used hardwood pallets. In Australia, the splintering process has been used to develop a structural wood product called scrimler.

Another potential technology, making wood-flake-based products from recycled wood, may be more difficult. Wood flakes are manufactured by cutting or slicing flakes from solid wood pieces. The raw material should have a high moisture content and must be properly presized to produce a consistent product.

## Commodity Spotlight

Flake technology will probably be most successful where the waste stream is very controlled. Flakes are commonly used in sheathing products, such as oriented strandboard panels, which in turn are used as roof, floor, and wall sheathing.

An existing, though not widely used, building product combines recycled wood with an inorganic binder such as portland cement. Considering that over 60 percent of all Southern pine lumber cut today is treated with some sort of preservative, it is conceivable that an increase in this type of material in the waste stream will occur. A cement-bonded product has the advantage of a long life expectancy.

Research is also underway to produce housing components from recycled wastepaper fiber. An engineered structural component called Spaceboard is the product of a pulp-molding process. In addition, a pulp-extrusion process has the potential to produce casing and trim products.

A third new technology—a wet-formed, fiber-based process—involves shaping structural components through the winding of papersheet stock. This process can produce round, rectangular, and other desired cross-sectional shapes.

Developing products that can easily be formed or molded may have special application in wind-resistant design, as well as improved energy-efficient design. For example, structures with curved or rounded edges or shapes are more aerodynamic, more energy efficient, and require less material to enclose a given living area than square or rectangular shapes. Moldable structural composites from recycled waste might be used to fabricate stress-skin panel corners to replace the conventional three-stud corner. This would minimize building heat loss, improve shear performance of panels, and reduce wind pressure from turbulence around the building corners in heavy winds.

In addition to composite products which have increased recycled wood content, new composites which reduce the need for old-growth lumber are also being developed. For example, Trus Joist MacMillan in Boise, Idaho, is manufacturing composite wood I-joists from smaller diameter, second- and third-growth timber. The company uses resins to laminate smaller pieces of trees into structural beams comparable to those milled from older, larger trees.

Composites are the fastest growing segment of the wood products market today, and have building and design properties that can outperform conventional sawn-timber products. Laminated wood, for example, can be three times as strong as conventional timber, and could challenge steel and concrete as a building material.

### **Recycled Composites Hitting the Market**

Several companies are moving ahead with recycled wood products. Wood Recycling, Inc., in Peabody, Massachusetts, uses a patented process to convert urban wood waste into wood fiber with applications in composite boards and pulp and paper. "Re-Fiber," for example, is being marketed as the only wood fiber mulch product available made from 100-percent recycled wood. The company's primary facility can take in, separate, and sort as much as 1,000 tons per day of demolition and construction waste, and convert the wood fraction into wood chips. A secondary facility converts the recycled wood chips into wood fiber, and then formulates and packages it for sale.

Gridcore Systems International Corporation in Carlsbad, California, uses recycled wood, paper, cardboard, or any other fiber source (including kenaf), to make Gridcore panels. The panels are molded fibers cast into sheets with one smooth surface and one waffle-textured

surface. According to the company, the material forms a lightweight, sturdy panel for the housing and construction industries. The company's first production line, based on the Spaceboard technology licensed from USDA's Forest Products Laboratory, is scheduled to start in early fall.

Phenix Composites, Inc., in Mankato, Minnesota, makes a composite building material called Environ (formerly called Nustone) using wastepaper and soybean meal. The material has the appearance of granite but the construction properties of wood. It can be manufactured into panels, blocks, or veneers, and colored to simulate many granite hues. Phenix began production of Environ this summer, and expects it to be operating at full capacity by later this year.

Architects, builders, designers, and consumers are beginning to explore the functional, aesthetic, and design potential of the new recycled composites as more of these products approach the commercialization phase and enter the market.

*(Thomas Marcin (608) 231-9366 and  
Cathy Greene (202) 219-0313) AO*

### **Upcoming Reports from USDA's Economic Research Service**

The following are September release dates for ERS update reports (specified) and for summaries of situation and outlook reports. Summaries are issued at 3 p.m. Eastern time.

#### **September**

7	<i>Agricultural Income &amp; Finance</i>
16	<i>Tobacco</i>
	<i>Europe</i>
17	<i>Agricultural Outlook</i>
20	<i>Wheat</i>
	<i>U.S. Agricultural Trade Update</i>
21	<i>Sugar &amp; Sweetener</i>
22	<i>Aquaculture</i>
23	<i>Asia &amp; Pacific Rim</i>
24	<i>Livestock &amp; Poultry Update</i>

## Policy



# New Marketing Loan Provisions

For the first time, marketing loan provisions are available to eligible wheat and feed grain producers—beginning with the 1993 crop year. The impetus for this action was the Omnibus Budget Reconciliation Act of 1990, which required the Secretary of Agriculture to implement marketing loan provisions for 1993-95 wheat and feed grain crops if a GATT accord was not signed by June 30, 1992. As of August 1993, no GATT accord had been signed.

Marketing loan provisions are designed to help minimize potential loan forfeitures and accumulation of government stocks when prices are low relative to CCC loan rates. This helps keep CCC loan programs from interfering with markets, and provides additional income support to producers when prices are low.

While marketing loan provisions were available for rice and cotton since 1985 and for soybeans and minor oilseeds beginning in 1991, prices have not always been low enough for many producers to receive payments, and only rice produc-

ers have consistently received benefits. However, as of mid-1993, low wheat prices have already resulted in benefits to some wheat producers.

### *A Repayment Alternative*

Marketing loan provisions provide an alternative method for repaying CCC nonrecourse loans. CCC loans allow producers who participate in the commodity programs to use their commodity as collateral for a loan. Producers often take out a CCC nonrecourse loan to obtain short-term financing, and most often do so at harvest or soon thereafter.

CCC nonrecourse loans provide producers with ready cash, and allow them to hold commodities until later in the marketing year when prices may be higher than traditional harvest-time lows. CCC loans serve this function regardless of relative levels of loan rates and market prices. The loan program also helps provide income support, and at times has provided price support to producers.

The amount of a CCC loan, which has a repayment period of approximately 9 months, equals the county loan rate announced by CCC in that year adjusted for premiums and discounts, multiplied by the commodity quantity eligible for loan. County loan rates vary across counties and commodities. The eligible loan quantity is the quantity of the commodity harvested on a farm that is enrolled in an annual commodity program. Producers are responsible for storage costs while the commodity is under loan.

Once a CCC nonrecourse loan has been obtained, the producer can choose to repay the loan principal, plus accrued interest, at any time over the loan period. When market prices are near the loan rate, producers choose to repay the loan once the market price rises sufficiently to at least cover the county loan rate plus accrued interest. If the loan is not repaid by the end of the loan term, CCC takes title to the grain in lieu of repayment. (Regardless of whether a loan is repaid, the producer must pay for storage while the commodity is under CCC loan.)

With marketing loan provisions, producers may, under certain conditions, either: 1) repay a 9-month loan at less than the loan principal plus interest, or 2) receive a loan deficiency payment (LDP) in lieu of obtaining a loan. Producers are not eligible for marketing loan benefits until after harvest of the commodity.

Under the first option, a producer can repay the loan at the lesser of the "marketing loan repayment rate" or the county loan rate plus accrued interest. As specified by USDA, the marketing loan repayment rate for wheat and feed grains is the "posted county price," or PCP. A county's PCP is a proxy for the local market price of a commodity on a given day, and is based on the previous day's market prices at U.S. terminal markets, adjusted to reflect quality and location. PCP's are calculated each day for a county using established formulas, and are available at each county office of the Agricultural Stabilization and Conservation Service (ASCS).

If the loan is repaid at the PCP, the positive difference between the loan principal (i.e., the county loan rate) and the marketing loan repayment rate (i.e., the PCP) is called the "marketing loan gain." In short, this gain is realized by obtaining and repaying a loan at less than the loan principal. After repaying the loan, a producer can sell the commodity in the cash market.

Under the second option, an eligible producer may choose to forgo taking out a loan and instead request a loan deficiency payment (LDP). The LDP is based on the difference between the county loan rate and the PCP on a given day, and is captured on the day chosen by the producer.

The maximum LDP quantity is 100 percent of the quantity eligible for loan. LDP's are offered mainly because they are more convenient for producers who do not want to take out a loan and also require less processing time than does loan placement and redemption.

## Benefits & Costs

Under the nonrecourse loan program, the loan rate in certain periods served as an effective floor for market prices. That is, when the market price was below the loan rate, eligible producers had a financial incentive to place their crop under loan. As more grain was placed under loan, the free supply of the commodity was restricted and the market price tended to be supported at the level of the loan rate.

During years such as 1985, market prices for wheat and corn were sufficiently low that producers often did not repay their loans, and forfeited their grain into CCC inventories. As a result, CCC inventories of wheat accumulated, and by the end of the 1986 marketing year, CCC wheat inventories accounted for nearly half of total wheat ending stocks.

Under marketing loan provisions, producers have a financial incentive to repay loans rather than forfeit their crops to the CCC, partly because of the savings in storage costs. And, with the crop not isolated from the market in CCC inventories, the loan rate does not establish a price floor in high-supply years. While this reduces interference of loan programs with markets, it also increases Federal budget exposure. Budget exposure is high in large-supply years because the accompanying lower prices increase potential benefits and the quantity of production eligible for benefits is larger.

Marketing loan provisions are "budget neutral" (i.e., costs to the government are zero) only when daily market prices remain above loan rates (plus accrued interest) so that no marketing loan benefits are paid.

## Requirements for Eligibility

Producers must meet certain criteria to be eligible for marketing loan benefits. Crops eligible for marketing loan gains due to the GATT trigger provisions include wheat and feed grains (corn, grain sorghum, barley, oats, and rye). Rice has been eligible for marketing loans since

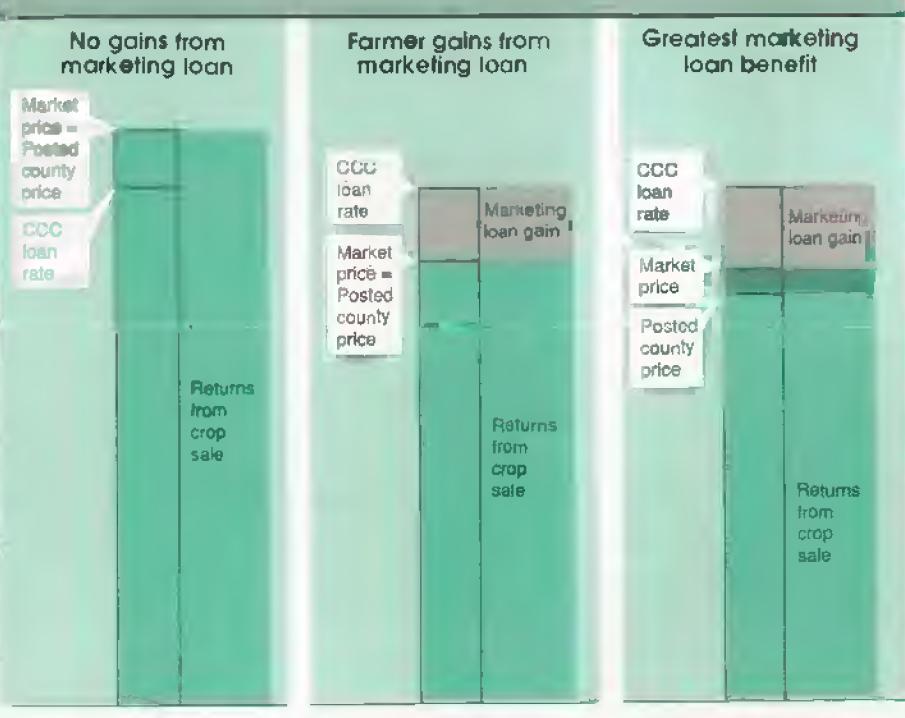
## Marketing Loans: Calculating the Benefits

Marketing loan benefits depend on market conditions. The existence, and the extent, of any marketing loan gain on a given day depends on the relationships between the PCP (posted county price), the county loan rate (or CCC loan rate), and the market price at which the producer can sell the crop. The following examples assume that a wheat producer has taken out a loan at the county loan rate of \$2.45 per bushel (the national average loan rate in 1993) and owes \$0.03 of accrued interest, for a total outstanding principal and interest balance of \$2.48.

In the first example, suppose both the PCP and the market price equal \$3. No marketing loan gain is available because the PCP is above the loan principal plus interest. The producer would repay the loan, with interest, at \$2.48 and sell the crop at the higher market price for \$3. The producer's return is the \$3 market price less the \$0.03 interest paid on the loan, or \$2.97.

In the second example, both the PCP and the market price equal \$2.40, which is below the \$2.45 county loan rate. In this example, the producer can repay the outstanding loan balance at the PCP (\$2.40), and sell the grain in the market at \$2.40. The accrued interest of \$0.03 is forgiven and the producer's market return is the 5-cent marketing loan gain, plus the \$2.40 market price, or \$2.45 (which is equal to the loan rate).

The greatest marketing loan benefit to producers occurs when the PCP is below the market price. Because PCP's are calculated administratively using formulas, it would not be unusual if one or more of the 5,500 wheat county/class PCP's did not exactly equal the local market price on a given day. On average, over time, PCP's should be reasonable proxies for local prices. The third example illustrates this point, with the PCP at \$2.40 and the market price at \$2.44. In this situation, the producer can repay the \$2.48 outstanding loan and interest at \$2.40, have the 3 cents in interest forgiven and a marketing loan gain of 5 cents a bushel, and sell the crop at \$2.44. The producer's market return in this example is the \$2.44 market price plus the 5-cent marketing loan gain, or \$2.49.



## Policy

the 1985/86 crop year, cotton since 1986/87, and soybeans and minor oilseeds since 1991/92.

Under the wheat and feed grain provisions, a producer must participate in the commodity program for that crop, and comply with all acreage reduction requirements. The wheat or feed grain crops, except for rye, must be produced on program-permitted acreage or flex acres, and the producer must ensure that the grain meets the requirements of CCC minimum grade and quality standards.

In addition, the producer must have beneficial interest in the commodity on the date the price support loan or LDP is requested. This means that the following criteria must be met:

- **Control of the commodity.** The producer must retain the ability to make all decisions affecting the commodity, including movement, sale, and the request for a loan or LDP.
- **Risk of loss.** The producer must be responsible for loss or damage to the commodity.
- **Title to the commodity.** The producer must not have sold or delivered the commodity or warehouse receipt to a buyer.

Once beneficial interest in the commodity is lost, the commodity loses eligibility for a loan or an LDP at any time in the future.

### Marketing Loan Payments Realized

As of early August 1993, low wheat prices have resulted in LDP's to farmers in some counties for certain classes of

wheat. Each county has one all-wheat loan rate, but PCP's vary with each class of wheat produced in the county. As of August 5, most LDP's had been paid for Soft Red Winter wheat. USDA had paid about \$700,000 in LDP's as of that date, with Texas accounting for 78 percent of the total, Mississippi 10 percent, and Tennessee 4 percent. Because wheat prices have increased, only a few counties have potential LDP's in late August.

Marketing loan gains realized through loan placement and repayment have so far been nonexistent for wheat. Among the plausible reasons:

- many producers use CCC loan programs as low-cost, short-term financing and do not want to give up this financing until later;
- harvest has been relatively late this year, and producers have had less time than normal to place and redeem their 1993 crop; and
- spring wheat producers account for a large share of wheat loan activity, and they had not yet begun to harvest their 1993 crop as of early August.

As of early August, USDA had not paid LDP's for any feed grains. Prices for sorghum, barley, and oats have not been low enough for farmers to realize marketing loan benefits, while producers of 1993-crop corn will not begin harvesting until early fall, and corn producers are not eligible for LDP's or marketing loan gains until the crop is harvested.

*(Joy Harwood (202) 219-0840 and Craig Jagger (202) 720-4418) AO*

## Rural Development



### Poverty Is Persistent In Some Rural Areas

From the invisible poor of Appalachia's Southern Highlands to the former black tenant farmers in the old South and the Hispanic farmworkers in Texas today, poverty in rural areas and small towns often matches or exceeds what is found in large central cities. While farm poverty is now a small share of total rural poverty, historical connections to farming play a role in some poor populations. Most areas of persistent poverty can be classified in distinctive racial and/or cultural contexts.

Nearly 23 percent of all nonmetropolitan counties had high levels of poverty at the beginning of the 1990's, compared with 4 percent of metropolitan counties. In nonmetro counties of persistently high poverty, the poverty rate was twice that of all other nonmetro counties.

## Defining & Measuring Persistent Poverty

Very low income can stem from many circumstances. Some causes may be personal, reflecting poor health, or a family situation such as failure of an absent spouse to provide child support. Other cases result from economic events, such as a factory shutdown. But much poverty is less event-specific, and is related instead to long-established factors such as the legacy of race discrimination, or the structure of regional economies where even full-time workers earn only poverty-level incomes.

Given these varying conditions, periods of very low income may be only temporary for many people, ended by a change in personal circumstances or by a new job. For others, low income may be of long duration.

For entire areas as well, the duration of poverty can vary. A rural and small-town community may have a current high poverty rate only because of a poor year for farm income. Asset levels may remain high, and incomes may rise the next year.

Conversely, there are numerous rural areas where poverty has been persistently high for decades. Rural areas are defined in this article as nonmetropolitan counties—counties with populations of less than 100,000. County-level census data can be used to identify nonmetropolitan counties that had high poverty rates in each of the last four censuses, 1960 to 1990. In this article, such counties are defined as having persistently high poverty. A county with a high incidence of poverty is defined as having 20 percent or more of its population living in households with poverty-level income.

Statisticians measure the size of the poverty population by comparing total money income to a poverty threshold that varies by size of the household. Poverty thresholds are adjusted annually by the Consumer Price Index. No allowances for regional variations in costs of living are available.

Illustrative poverty income thresholds from the 1990 Census are: less than \$6,451 for a person under 65 living alone, \$8,343 for a two-person household with the head under 65, and \$12,575 for four persons, including two children under 18 years. Income includes wages and salaries and other earned income as well as that received from cash transfer payments such as Social Security, public assistance, retirement or disability income, or child support. While the threshold measures poverty after the receipt of cash assistance, it excludes the cash value of such programs as public housing, food stamps, and Medicare. Thus, the data overstate the incidence of poverty after accounting for all ameliorative programs, but they underestimate the number of people who would be poor without public income support.

Among nonmetro counties, 540 have had poverty levels of 20 percent or more in each of the last four censuses. This is nearly a fourth of all nonmetro counties. The national incidence of poverty was 13.1 percent in the 1990 Census, based on 1989 income, up slightly from 12.4 percent in 1980. For nonmetro areas, the figure of 16.8 percent in 1990 was a somewhat greater rise from 15.4 percent in 1980. The poverty rate in nonmetro counties of persistently high poverty was 28.7 percent, twice that of all other nonmetro counties (14.4 percent).

A map of persistent poverty nonmetro counties shows large numbers in the coastal plain and highlands regions of the South, along or near the Rio Grande from its source to its mouth, portions of the Texas plains, and scattered counties elsewhere. Persistent poverty counties are not found in the Northeast or on the Pacific coast, and are rare in the Corn Belt. In terms of demographic and cultural geography, the vast majority of the counties fall within four types. They are counties in which the source of the high overall poverty rate is primarily in the black population, the Hispanic population, the American Indian or Alaskan native population, or the population of the Southern Highlands.

**Areas of high black poverty.**—In 255 of the counties, the high overall poverty rate reflects conditions in the African American population. These are counties either where blacks are a majority of the poor, or where a high incidence of poverty among blacks produces an overall county rate of 20 percent or more.

These counties are in the heart of the old agricultural South—once dependent mostly on cotton. Blacks make up 67.5 percent of all poor persons in these counties. Rural poverty had been endemic among blacks in the past, when they were principally small-scale tenant farmers. Comparatively few blacks today are still involved in agriculture, however, either as farmers or laborers. But, although there have been major improvements in education, employment, public assistance, living standards, and access to public life, the level of black poverty is still over 50 percent in more than 100 of these counties and less than 30 percent in only two of them.

The areas dominated by black poverty have several features typically associated with low income, such as a high ratio of population to workers, early childbearing, low availability of year-round full-time work, and low education.

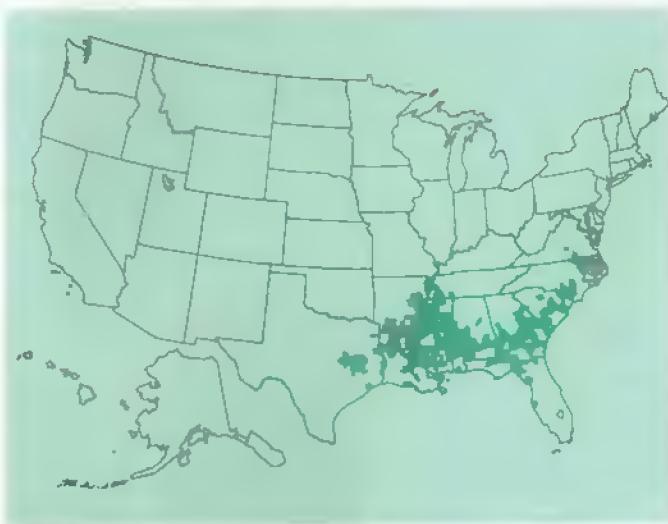
Compared with other nonmetro counties, these counties have an especially high percentage of children under 18 whose families are not headed by a married couple (31 percent), a situation frequently associated with low income and welfare dependence. Some 29 percent of the black households do not have a motor vehicle—a condition likely caused by poverty but which also hinders employment.

A striking feature in many of these counties is the vast difference between poverty rates for blacks and whites. In 1990, persistent poverty counties in Alabama, Arkansas, Louisiana, and Mississippi had average poverty rates of 51.4 percent for blacks, compared with 15.4 percent for whites, reflecting social and economic conditions that are still radically different for the two racial groups. On the more industrialized east coast, in the Carolinas and Virginia, the black poverty counties have an average poverty rate of 37 percent for blacks and 11.6 percent for

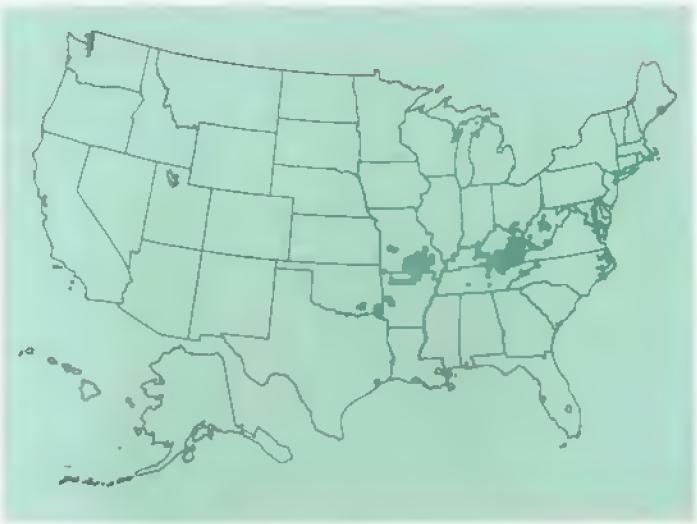
## Rural Development

### Persistent Nonmetro Poverty Is Concentrated in the South

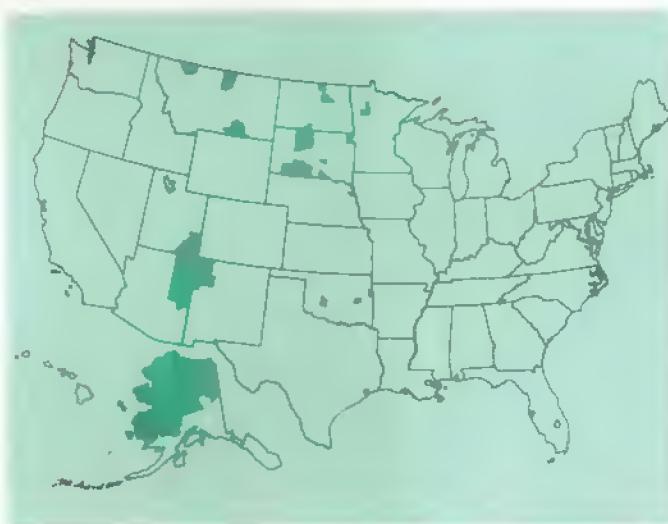
High Black Poverty



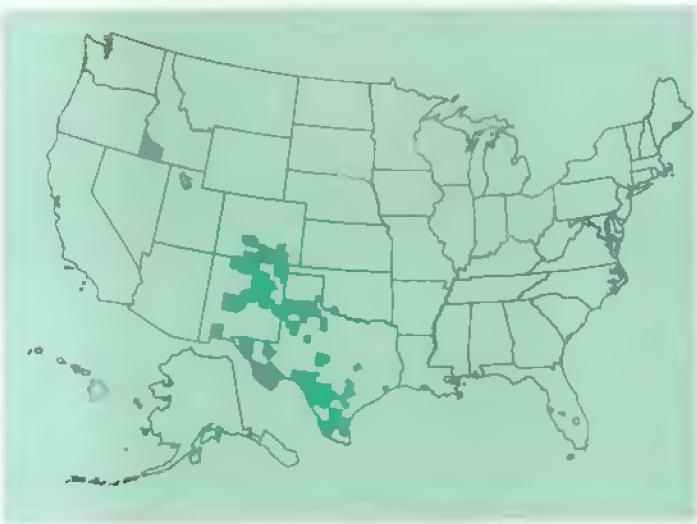
Southern Highlands



High American Indian or Alaskan Native Poverty



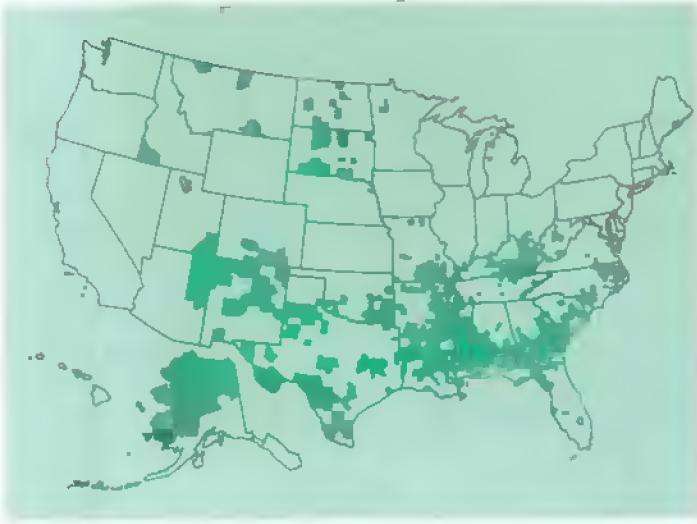
High Hispanic Poverty



All Other Persistent Poverty Areas



Total Nonmetro Persistent Poverty Areas



Nonmetro counties with persistent high poverty--overall poverty rates of 20 percent or more from 1960 to 1990.  
A nonmetro county has a total population of less than 100,000.

Source: Bureau of the Census.

whites, but nowhere did the rate reach 50 percent for blacks. All told, blacks make up 67.5 percent of the poverty population in the counties characterized as black poverty areas, while comprising 40.3 percent of all persons.

**Areas of high Hispanic poverty.**—Persistent poverty counties where low income occurs primarily in the Hispanic population are in Texas, New Mexico, and Colorado. Within the 73 such counties, 76 percent of all poor persons are Hispanic. Many of these counties are on or near the Rio Grande, where Mexican settlements already existed when the U.S. acquired the land. The counties on the Mexican border in Texas include many recent immigrants, while those in New Mexico and Colorado have few.

Other areas with high Hispanic poverty rates reflect the extensive migration of Mexican Americans to High Plains counties as farmworkers over the last two generations, following the introduction of irrigated agriculture. Over time, many of these people have remained in the Plains, but have moved into other occupations. Because their proportion in the population is steadily growing, their susceptibility to poverty is increasingly important in determining the overall poverty rate of the Plains counties.

Hispanic poverty counties as a group do not show the highest incidence of any of the socioeconomic measures shown to be associated with poverty. These counties are, however, well above nonmetro or metro areas as a whole in the ratio of population to workers, men who lack full-time year-round work, adults who did not complete high school, youth who have dropped out, and incidence of early childbearing.

The Plains counties with high persistent poverty are the areas where poor families are most likely to work in agriculture. In 1980, 29 percent of all employed Hispanics in these counties worked in agriculture, compared with only 7 percent of nonmetro workers nationally. For men, the percentage in agriculture was closer to 40. The vast majority were not operators but hired farmworkers (91 percent), an occupation characterized by low wages and seasonality of work. In the

Hispanic poverty counties of Texas, poverty has been more widespread than would be expected from per capita income levels, because of the manner in which income is distributed.

**Areas of high poverty among American Indians and Alaskan Natives.**—There were 35 counties and equivalents in 1990 where low income levels among native Americans—Indians and Alaskan Natives—are the source of persistent poverty. Outside Alaska, all affected counties contained Indian reservations, except in Oklahoma where they encompass former reservations and nations. In the Alaskan areas, the residents are principally Eskimos.

The Indian and Alaskan Native counties are the least populous of the poverty types. They have distinct characteristics that affect the incidence of poverty and their development potential. They have the highest overall poverty rate of any of the county types (34.2 percent), with rates for the Indians and Alaskan Natives themselves averaging 50.9 percent. Most seriously, over three-fourths of the poor are severely impoverished, with incomes less than 75 percent of the official poverty level. Some 26 percent of the entire population had severely low income even including all forms of cash assistance.

With limited work availability and below-average labor force participation, workers in the Native American counties have a much higher level of dependents per worker than is true in other rural areas. In 1990, there were 312 persons of all ages per 100 employed people, compared with ratios of 227 in nonmetro counties without persistent high poverty, and 206 in metro areas. Further, among men who had employment in 1989, only 35.2 percent had full-time year-round work, compared with the norm of 50 percent in the U.S. as a whole.

Poor people in Native American persistent poverty counties have a different age composition from those in the areas of black and Southern Highlands poverty. In poor households in the latter areas there are two children under 18 for every person 60 years and over. But in the Native American areas, poor children outnumber poor older people by four to one.

In part this reflects the low average age of Native Americans in general, given their above-average family size and their lower life expectancy. Among other factors are the comparatively high rate of childbearing among younger women (under age 25), which adds more members to families whose earnings are still low, and the relatively low percentage of Indians who live alone in old age.

**Southern Highlands.**—A fourth large bloc of nonmetro counties with chronic high poverty is in the Southern Highlands, mostly in the Cumberland Plateau and Highland Rim country of the Southern Appalachians, but also including parts of the Ozark Plateau and the Ouachita Mountains. Here racial and ethnic minorities are few, and 95 percent of the poverty is in the white population.

A satisfactory explanation of why income levels for the white population in these counties remain so much lower than those elsewhere is elusive. The topography of the area offers limited farming potential. Settled by people of modest capital, the area has remained exceptionally rural, with three-fifths of the persistent poverty counties having no town of even 2,500 people, limiting the variety and complexity of occupations available. Both the eastern and western parts of the Southern Highlands became regarded at an early date as isolated, culturally divergent, and poor.

Conditions in the modern era have not been static. The Blue Ridge and Great Smokies areas of the Southern Appalachians have emerged almost entirely from persistent high poverty. But the 106 counties defined here share a number of conditions that contribute to current poverty levels.

In education, only 47.7 percent of the population 25 years of age and over were not high school graduates in 1990. This is exceptionally high. College graduates were just 7.9 percent of the population, the lowest for any of the poverty areas. Thus, for every adult with a college degree, there were more than six without a high school diploma. Outside the persistent poverty counties the national nonmetro ratio was just two to one (28.5 to 13.5), and in metro America the

## Rural Development

### Characteristics of Nonmetro Counties with Persistent Poverty

	Persistent poverty county classification						
	Black	Hispanic	Indian & Alaskan native	Southern Highlands	Other persistent poverty	Total persistent poverty	Other nonmetro counties
Population (1,000)	5,356	941	558	1,781	828	9,464	45,414
Persons in poverty (1,000)*	1,479	299	191	514	230	2,714	6,506
Percent in poverty: 1990	27.6	31.8	34.2	28.8	27.8	28.7	14.3
1980	27.2	26.9	29.2	26.4	24.7	26.9	13.2
1970	38.7	34.1	35.8	38.7	34.3	37.7	16.6
1960	59.8	47.1	48.2	59.1	52.5	57.3	29.7
Percent in poverty by race:	14.7	NA	15.3	28.5	23.3	20.6	12.8
White							
Black	46.3	—	—	—	54.2	46.6	32.5
Indian	27.5	—	50.9	—	—	45.1	33.5
Hispanic	—	43.6	—	—	—	42.2	26.4
Population per 100 workers	259	274	312	286	271	269	227
Children ever born to 1,000 women age 15-24	443	455	538	419	439	444	335
				Percent			
Male workers with year-round full-time work	42.1	40.2	35.2	35.6	39.0	40.0	47.2
Population 16-64 with work disability	11.7	9.4	9.8	16.2	13.7	12.4	9.5
Education—age 25 & over:							
Not high school graduates	41.1	42.8	36.4	47.7	42.9	42.5	28.5
College graduates	10.9	11.1	10.9	7.9	9.0	10.2	13.5
Children under 18 not living with married couple	31	18.9	26.0	17.5	22.5	26.1	17.4
Households with no motor vehicle	14.9	10.1	16.7	12.6	11.9	13.8	7.9
White	6.8	—	7.2	12.4	9.3	8.8	7.0
Black	29.3	—	—	—	32.7	29.4	24.3
Indian	13.1	—	29.9	—	—	23.9	14.6
Hispanic	—	13.8	—	—	—	13.6	10.1
Persons in households with income below 75 percent of poverty level	19.6	22.3	26.2	20.4	19.1	20.4	9.4

Data are for 1990, unless otherwise indicated.

NA = Not available.

— = Population base less than 50,000.

\* Numbers do not total due to rounding.

Source: Census of Population, U.S. Bureau of the Census.

percentages are nearly equal (23 to 22.5). Many young people in the Southern Highlands who attain a standard level of education move elsewhere for economic opportunity, and the high school dropout rate continues to exceed that in other areas.

The earnings ability of Southern Highlands residents is also impaired by lack of full-time year-round work. Among men living in the area who worked in 1989, only 35.6 percent had worked at least 50 weeks of 35 or more hours. This is similar to the low level of full-time work reported in the Indian poverty areas.

Earning potential is also hindered by a relatively high level of work-limiting physical disability reported by adults 16-64. Sixteen percent reported disabilities that either limited their ability to work or prevented them from working at all. This compares with just 9.5 percent in nonmetro counties other than the persistent poverty areas. Some disabilities stem from coal mining injuries and diseases, but many of the high rates are not in mining counties. The unusual prevalence of disability restricts the potential efficiency of economic solutions to Southern Highlands poverty.

**Other persistent poverty areas.**—Only an eighth of the persistent poverty counties fall outside the four identified types. Many are counties that do not quite fit one of the other types. Some have high rates of black, Hispanic, or Indian poverty, but white households comprise most of the poor. Others adjoin Southern Highlands areas, but are not part of them. About a dozen are Midwestern corn or wheat belt counties of marginal productivity that have no urban places. The characteristics of the "all other" group tend to fall in the middle range among persistent poverty counties, except that they have the highest percentage of older people among those in poverty (20.6 percent) and the lowest rate of severe poverty (19.1 percent).

## Change Since 1960

The greatest progress in reducing the occurrence of poverty level incomes since 1960 has been made in the black and Southern Highlands areas. Starting at similar levels of poverty in 1960 (59.8 and 59.1 percent), those areas were down more than half to 27.6 and 29 percent in 1990. This is a major change. However, all the progress occurred from 1960 to 1980. In the decade from 1980 to 1990, the poverty rate in the Southern Highlands areas reverted to a higher level, rising from 26.4 to 28.8, and the rate in the black poverty counties rose slightly from 27.2 to 27.6.

Far less improvement has occurred in the Hispanic and Indian areas. Somewhat less than half their populations lived in poverty in 1960 in these areas (47.1 and 48.2 percent), but the rates remain above 30 percent today (31.8 and 34.2).

Rural and small-town counties of high persistent poverty accounted for 29.2 percent of the total poor nonmetro population in 1990, a somewhat smaller percentage than in 1960 (32.4). Thus it must be stressed that they do not dominate the nonmetro poverty problem. Rather, they are the areas where poverty is most entrenched at levels well above the norm.

Other research has shown that most people who experience poverty do not do so on a permanent basis. And most poor nonmetro residents do not live in counties that show high area-wide poverty decade after decade.

But the 2.7 million who do so live in counties where the high incidence of poverty becomes in itself an impediment to self-generated progress. It limits the tax base and imposes a poverty of services. The lagging education of the labor force makes it difficult to attract new jobs other than those of low skills and modest wages. And the distinctive racial and/or cultural context of most of the persistent poverty areas makes it clear that their problems cannot be solved without addressing their specific problems.

*[Calvin Beale (202) 219-0535] AO*

## Tobacco Economies: What's Ahead?

**A**s tobacco consumption declines—due to health concerns, increased regulation, and excise taxes—and lawmakers consider further increases in cigarette taxes, many in rural tobacco growing areas are troubled by the potential economic impact on their local economies. Tobacco, which played a key role in the economic development of the American colonies, is still considered a mainstay of many local economies in the Southeastern U.S.

USDA's Economic Research Service recently projected that the overall economic impacts of a 30-percent decline in tobacco production (similar to the decline experienced during the early 1980's) would be fairly small as a share of total economic activity in tobacco growing areas.

Impacts from a 30-percent drop in U.S. cigarette manufacturing output were projected to be much larger than from a sharp decline in tobacco growing. However, cigarette manufacturing output has been rising in recent years. Recent legislation restricting foreign tobacco content in U.S.-manufactured cigarettes could change this trend and could move some manufacturers abroad.

## Tobacco Activity Centers in the South

Tobacco is grown in 21 states, but production is concentrated in only six states—Kentucky, southern Georgia and parts of Tennessee, the coastal plain and piedmont of the Carolinas, and Southern Virginia. In these regions, tobacco accounts for a large share of farm sales, and generates a much higher return per acre than corn, wheat, soybeans or other field crops.

## Rural Development

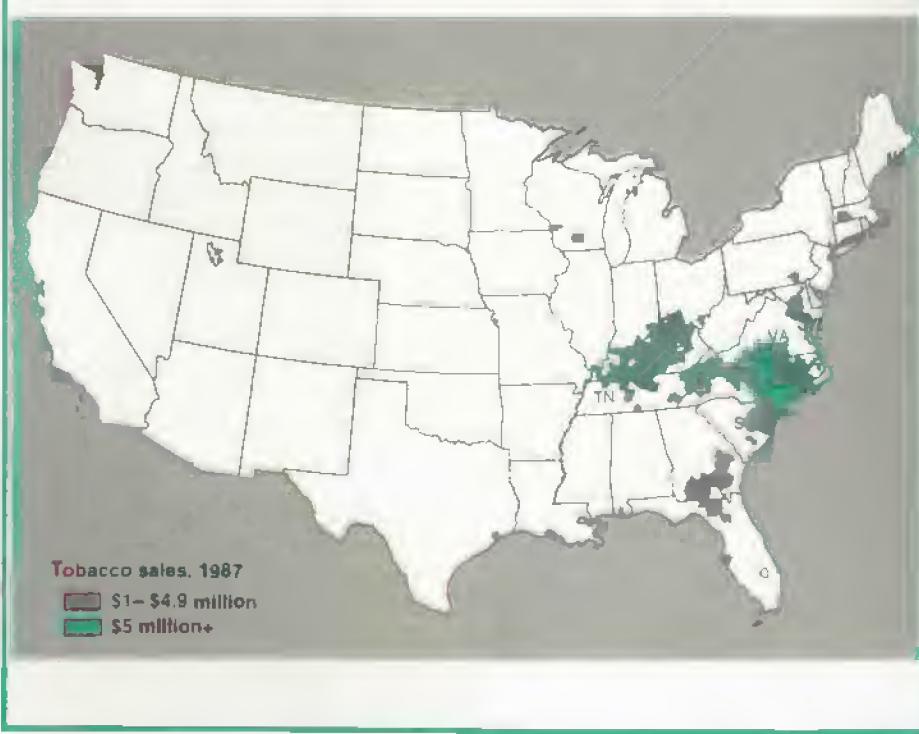
### Tobacco Growing Clustered in Six Southern States

Approximately 282 counties in six states—North Carolina, Kentucky, Virginia, Georgia, South Carolina, and Tennessee—account for most U.S. tobacco production. Over 100 of these counties are identified in the previous article as counties with persistent poverty—with high poverty rates indicated in each of the previous four censuses (1960-90).

Many of the tobacco counties identified with persistent poverty have a higher proportion of black-operated farms than in the South generally, especially in the Carolinas and Georgia. Black-operated farms have been especially vulnerable to changes in agriculture. And in the 1970's, tobacco farming was the single leading type of commercial farming by blacks.

But today tobacco growing is playing a less prominent role on black-operated farms than in the past. By 1987 over half of black-operated farms specialized in livestock production and only 11 percent (2,460) specialized in tobacco.

As the analysis in this article points out, the economies of few tobacco growing counties rely heavily on tobacco production. Only 28 tobacco growing counties are tobacco dependent—deriving more than 5 percent of their income from tobacco farming. Over three-quarters of these tobacco-dependent counties are in Kentucky, which has few black-operated farms.



At last count in 1987, 137,000 farms in the U.S. grew tobacco. The estimated gross farm value of the tobacco crop in 1992 was about \$3 billion. Those gross

receipts provided income to tobacco growers, landowners, hired workers, sellers of farm inputs, and owners of tobacco quota.

While tobacco growing generates considerable income at the farm level, it accounts for only a small fraction of the economic activity associated with tobacco products. The \$3 billion in gross farm sales is small in comparison with the nearly \$50 billion in retail spending on tobacco products and over \$6 billion in tobacco exports in 1992. The difference between consumer expenditures and the value of tobacco leaf represents value added through storage (aging), manufacturing, transportation, advertising, and distribution, as well as excise taxes at the Federal, state and local levels. In 1992, excise taxes totaled more than \$11 billion.

Beyond the farm gate, value is added by aging, separating stems and midribs, redrying, warehousing, manufacturing, and wholesale and retail trade. Growers sell nearly all their tobacco through auction markets, mostly in cities and towns such as Lexington, Kentucky and Danville, Virginia. Manufacturers and dealers redry and store tobacco, usually in towns and cities with larger auction markets. After aging, tobacco is exported, or is processed domestically into consumer products, generally in large cities such as Winston-Salem, North Carolina and Richmond, Virginia.

From there, tobacco products are shipped throughout the nation. In 1987, 1,813 establishments sold tobacco products wholesale, with sales of nearly \$25.5 billion. Tobacco wholesalers were located in every state, with the largest sales in Kentucky, New York, Virginia, California, and Illinois. Food stores, especially convenience stores, are the largest retail outlet for tobacco products, accounting for 56 percent of retail tobacco products sales in 1987. Tobacco products account for 5 percent of sales by food stores.

### Growers Feel Brunt Of Declining Use

U.S. consumption of cigarettes, the dominant tobacco product, fell steadily from 640 billion in 1981 to 498 billion in 1992. However, a sharp rise in exports offset the domestic decline. Although U.S. consumers reduced the quantity of tobacco products purchased, expendi-

tures for tobacco products rose sharply between 1981 and 1992, from \$23 to \$48 billion (current dollars). The increase resulted from large price increases and from higher excise taxes passed on to consumers.

The increased retail value did not translate into a rise in tobacco sales at the farm level. Growers, located largely in rural areas, experienced steep declines in production and sales from 1982 to 1987, before sales rebounded in the latter part of the decade. The estimated crop value for domestic use was about \$1.7 billion in 1991, compared with \$1.8 billion in 1982. Domestic demand for U.S.-grown tobacco leaf has been weak, and the relatively high price of U.S. tobacco leaf has also dampened foreign demand for unmanufactured U.S. tobacco.

Value-added at the manufacturing level, however, increased sharply during this period. Urban-based manufacturing and distribution industries maintained revenues by raising prices and finding new export markets. The estimated U.S. manufacturers' cost of tobacco inputs rose slightly more than \$1 billion, from \$2.5 to \$3.6 billion, while manufacturers' value of shipments of cigarettes, cigars, and chewing and smoking tobacco rose from \$13 to \$32 billion.

Manufacturers also cut costs by cutting employment from 49,700 to 28,600 between 1982 and 1991, and substituting less expensive imported tobacco for domestic leaf. Between 1981 and 1987, Internal Revenue Service corporate tax return data show that tobacco manufacturers' net income rose from \$2.3 to \$4.4 billion.

### Diverse Economies Help Offset Declines

Tobacco farming accounts for a relatively small share of the local economy in counties where it is grown. Some of these counties are predominantly rural, but many are near expanding urban areas, and only a handful rely on farming

as the primary economic base. "Tobacco counties"—those that produced at least \$1 million of tobacco sales in 1987—received an average of 2.7 percent of personal income from farming in 1989.

On average, tobacco accounted for 21 percent of farm sales in tobacco counties according to the 1987 Census of Agriculture—the most recent county-level data available. Tobacco sales were unusually low in 1987; tobacco accounted for 30 percent of farm sales in 1982, the previous census year.

The county's share of income from tobacco farming—measured by multiplying the farm share of personal income by the tobacco share of farm sales—is less than 1 percent in most tobacco growing counties. In a selected group of multi-county trading areas (groups of counties having strong economic linkages) known to have major tobacco industries, the estimated tobacco income share is less than 2 percent. The estimated tobacco income share was less than 1 percent in all tobacco counties, even based on the larger tobacco share of farm sales shown in 1982 Census data.

### Farm Sales of Tobacco Have Not Reflected Rise In Wholesale Value of Products

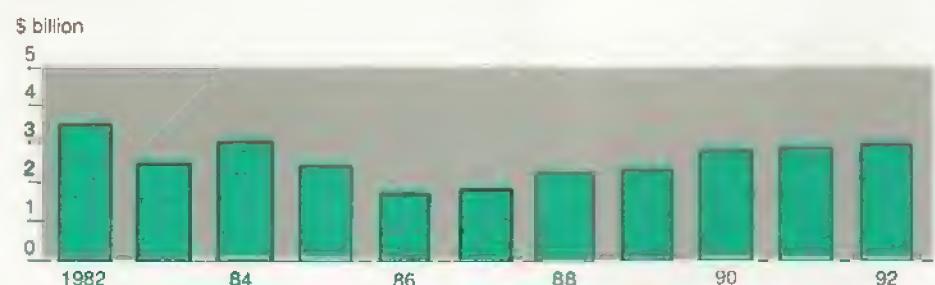
#### Wholesale Value



Wholesale value to manufacturers minus tax and distribution costs. Includes products from imported tobacco.

Source: Annual Survey of Manufacturers, Department of Commerce.

#### Farm Value



## Rural Development

### Despite Decline In Tobacco Sales, Income In Major Tobacco Areas Grew In the 1980's

Trading area	Counties	Farm sales of tobacco		Personal income from all sources		Shares of income from selected industries				
		1987	Change 1982-87	1989	Change 1979-89 <sup>†</sup>	All Manufacturing	Services	Government	All farming	Tobacco farming <sup>2</sup>
	Number	\$ mil	Percent	\$ bil	Percent					Percent
East central Kentucky	29	179.9	-41	6.7	19	23.1	21.4	21.2	5.6	1.5
Raleigh-Durham, NC	12	165.1	-32	14.2	57	22.6	24.1	19.7	1.5	0.6
Kinston-Goldsboro, NC	4	91.3	-34	1.8	14	26.8	14.4	27.0	8.6	1.6
Fayetteville, NC	7	90.9	-27	4.9	23	23.4	15.3	36.4	4.2	0.9
Rocky Mount-Wilson, NC	3	78.5	-34	2.2	27	31.7	18.0	13.0	5.8	1.0
Greeneville, NC	5	75.5	-37	1.9	36	29.6	15.2	23.5	7.1	1.8
Florence, SC	4	59.1	-31	2.2	18	33.7	19.2	15.0	2.7	1.3
Danville, VA	3	47.8	-36	2.7	23	42.0	18.5	13.0	2.1	1.1
New Bern, NC	4	24.3	-33	1.3	29	11.6	16.8	41.6	2.2	0.7
All U.S. tobacco counties <sup>3</sup>	282	1,649.0	-37	130.0	28	24.4	19.7	19.6	2.7	0.6

Selected multicounty trading areas

<sup>†</sup>Change in personal income is adjusted for inflation. <sup>2</sup>Farm income times percent of farm sales from tobacco. <sup>3</sup>Counties with at least \$1 million in tobacco sales in 1987.

Sources: Department of Commerce, Census of Agriculture and Bureau of Economic Analysis

### Impact of a 30-percent Decrease In Tobacco Product Demand Greatest In Cigarette Manufacturing Areas

	Outputs					Consumer spending <sup>1</sup>	Total impact	Multiplier <sup>2</sup>
	Tobacco (farm sales)	Stemming & drying	Cigarette manufacturing	Supplying industries				
\$ million								
Tobacco growing areas <sup>3</sup>								
East central Kentucky	62	35	0	42	72	211	2.18	
Rocky Mount-Wilson, NC	5	111	0	42	12	170	1.46	
Raleigh-Durham, NC	25	44	0	36	22	127	1.85	
Kinston-Goldsboro, NC	20	35	0	33	14	103	1.87	
Danville, VA	2	40	0	32	17	91	2.18	
Fayetteville, NC	50	0	0	4	17	71	1.43	
Greeneville, NC	16	20	0	20	10	66	1.84	
New Bern, NC	15	20	0	20	10	65	1.85	
Florence, SC	10	10	0	11	10	41	2.05	
Cigarette manufacturing areas <sup>4</sup>								
Winston-Salem-Greensboro, NC	71	0	1,700	120	116	2,007	1.13	
Richmond-Petersburg, VA	0	0	1,500	237	207	1,944	1.30	

Selected multicounty trading areas

<sup>1</sup>Decrease in consumer spending in local area is due to reduced employment. <sup>2</sup>Total impact divided by direct decrease in output. <sup>3</sup>Initial output impacts decline of 30 percent in stemming and redrying plus 30 percent in tobacco output processed outside the region. <sup>4</sup>Initial output impacts decline of 30 percent in cigarette manufacturing plus 30 percent in tobacco output processed outside the region. All stemming and redrying purchased locally.

The tobacco income share exceeded 10 percent in only three counties, and was over 5 percent in an additional 25 counties. Of these 28 most tobacco-dependent counties, 22 were in Kentucky, 5 in North Carolina, and 1 in Tennessee.

The impact of a declining tobacco industry has been blunted in counties that had growing, diversified economies through the decade of the 1980's. During the 1980's, tobacco counties (at least \$1 million in tobacco sales) experienced a 28-percent growth in personal income (adjusted for inflation), about equal to

the national average. The decline in gross tobacco receipts between 1982 and 1987, ranging from 27 to 41 percent in the major tobacco growing trade areas, was apparently offset by growth in other sectors. Manufacturing, services, and government are the dominant sectors in tobacco counties.

Of course, economic growth was not spread evenly across tobacco counties. For example, real personal income in the Raleigh-Durham trade area grew 57 percent between 1979 and 1989, while income in the nearby Kinston-Goldsboro area grew only 14 percent. Rural areas have generally experienced less income growth than metropolitan areas. A number of tobacco counties, mostly in Kentucky, experienced declines in real personal income during the 1980's.

Real personal income in the 28 counties with estimated tobacco income shares over 5 percent grew an average of only 10 percent during 1979-89. Counties with tobacco income shares between 1 and 4.9 percent grew 17 percent on average, and tobacco growing counties with tobacco income shares less than 1 percent experienced real income growth of 31 percent. High dependency on tobacco for income generally occurs in counties with relatively little nonfarm industry, suggesting that counties with the least diversification are the most vulnerable to the effects of declining tobacco production.

### *Projected Impacts Small In Farming Areas*

The impact of tobacco production on a local economy is understated by the share of tobacco farm sales in local income—input suppliers, landlords, hired workers, auction markets, warehouses, and processors also benefit from tobacco production. In addition, local retailers also benefit from the purchases made with tobacco income.

The impact on local economies of a 30-percent decline in tobacco demand was assessed with IMPLAN, an input-output model often used to estimate economic impacts on regional economies. The model contains data on cigarette and other tobacco product manufacturing industries, tobacco stemming and redrying, and tobacco farms. Tobacco wholesale and retail trade, however, could not be analyzed as a separate industry, so the impacts shown here will not include wholesale and retail impacts. The impact was estimated separately for each multi-county region analyzed.

Impacts were studied in nine major tobacco growing regions: Kinston-Goldsboro, Rocky Mount-Wilson, New Bern, Fayetteville, Greeneville, and Raleigh-Durham in North Carolina; Florence, South Carolina; Danville, Virginia/North Carolina; and Lexington, Kentucky.

The direct impact for tobacco growing regions in the model is 30 percent of tobacco stemming and redrying output in the regions, plus 30 percent of tobacco farm output processed in other regions. The model then traces the resulting impacts on supporting industries and consumer expenditures in the region.

The largest dollar-value direct impact on stemming-redrying and regional tobacco exports would be in the Rocky Mount-Wilson trading area of eastern North Carolina, totaling \$116 million. That would lead to an additional loss of \$42 million of demand from tobacco farms and other supporting industries. The resulting reduced employment and income would lead to a further "induced impact" on consumer goods and services of \$12 million. Total impact in the region would be \$170 million.

Total impacts range from \$41 million in the Florence trade area, to \$211 million in the Lexington area, which includes 29 counties in east-central Kentucky. As a share of total economic activity, however, the impacts are relatively small, ranging from 0.4 percent in the Raleigh-Durham trade area, to 2.9 percent in the Rocky Mount-Wilson trade area.

In general, each \$100 direct impact leads to a \$40-60 indirect impact on supporting industries in the region. Induced impacts are generally about half of the indirect impact. The multiplier—the ratio of total impacts to direct impacts—ranges from 1.43 to 2.18. The multiplier is generally larger in regions that have stemming and redrying operations. Tobacco farms have modest indirect impacts. Regions that import tobacco-related inputs from other regions or spend income in other regions also have lower multipliers.

The impacts of a 30-percent decline in cigarette manufacturing output and

tobacco farm regional exports were also estimated for two trading areas that have large cigarette manufacturing industries: Richmond-Petersburg, Virginia, covering much of south-central Virginia, and Winston-Salem-Greensboro, North Carolina, covering much of northwest North Carolina. These regions are centered around large cities but they also contain rural counties.

As expected, the dollar impacts of a decline in cigarette manufacturing are large. The \$1.5-billion direct impact in Richmond-Petersburg leads to a \$237-million indirect impact on supporting industries, and a \$207-million induced impact. The multipliers are actually smaller than for the tobacco growing areas. A \$100 direct impact in cigarette manufacturing would impact supporting industries and consumer goods and services by only \$30 in Richmond-Petersburg, and \$13 in Winston-Salem-Greensboro. But the total impact in each region would be about \$2 billion, over 5 percent of total economic activity.

This analysis illustrates the relatively important role of cigarette manufacturing in urban economies, compared with the role of tobacco growing, stemming, and redrying in smaller cities and towns. In recent years, the value of cigarette manufacturing shipments has risen sharply, despite declining domestic consumption, while farm sales were declining or stagnant. However, restrictions on foreign-grown tobacco in U.S.-manufactured cigarettes could move some cigarette manufacturing overseas.

As consumer dollars are diverted from spending on tobacco products to spending on other products, and to government coffers through rising excise taxes, the impact will be felt most keenly by the many individuals who depend on income from tobacco growing, including farm operators, owners of tobacco quota, and owners of tobacco land—mostly in the Southern states. Many of these local economies have weathered past declines in tobacco demand quite well, but some tobacco growing counties, mostly in Kentucky, have experienced stagnant growth and will be less able to make up for lost tobacco sales.

*JFred Gale (202) 219-0525* AO

## Special Articles



USDA photo by Ken Hammond

## Strategies for Wetlands Protection & Restoration

The near-record long, late rains that have swollen rivers in the upper Midwest and torn into levees along more than 1,000 miles of the Mississippi, Missouri, and Illinois Rivers serve as a vivid reminder of the flood-control function of the wetlands along these rivers.

In the upper Midwest, cropland covers over half of the flood-prone land—land which has more than a 1-percent chance of flooding in any year. This year, the rising rivers flooded cropland that had once been wetland. While much of this land will return to crop production after the floods recede, land in areas where levees have been breached and ditches have been silted in may take months to dry out.

According to the U.S. Fish and Wildlife Service, the nine-state upper Midwest region had more than 53 million acres of wetlands in 1780, but only 23 million acres remained 200 years later. In Minnesota, North and South Dakota, Wisconsin, and Nebraska, about 40 to 60 percent of the wetlands have been developed, drained for cropland, or otherwise converted. About 90 percent of the wetlands in Illinois, Iowa, Missouri, and Kansas have been converted. Shifts into agricultural uses accounted for the majority of conversions.

USDA's Economic Research Service estimates that more than 29 million of the 120 million acres of cropland in the upper Midwest were originally wetlands that have been cleared and drained for crop production. Hydrologists and ecologists believe that draining wetlands along rivers, combined with channeling and levee construction, contributes to higher flood levels and more powerful and destructive floods.

In recent legislation to provide disaster relief for the flooded areas, Congress included additional funds for the Wetlands Reserve Program (WRP)—mandated by the 1990 Farm Act to induce voluntary restoration of converted wetlands. New funds for the WRP, which would be used for permanent easements and additional wetlands restoration in these areas, would serve three objectives:

- assist flood victims while simultaneously increasing restored wetland acreage;
- save government crop insurance and disaster payments in the future by permanently retiring the most flood-prone farmland along these rivers (this would also reduce downstream flood damage by increasing flood peak storage);
- avoid costs for restoring levees and ditches in some areas, as well as reduce wetland restoration costs.

### *Wetlands Restoration Expected To Continue*

Congress and the Clinton Administration are considering additional wetland restoration funding for fiscal 1994. The WRP calls for the restoration of wetlands that were converted to cropland before 1985, and for permanent or long-term easements to restrict agricultural use of the restored wetland. Hunting, fishing, grazing during prescribed times, selective timber harvesting, and other uses compatible with wetland functions are allowed, and these uses should minimize the cost of the easements.

The first signup for the WRP took place in July 1992 in nine pilot states, and USDA selected 49,888 acres at a total cost of \$46.4 million, including \$37 million for easements. Owners of more than 462,000 acres had expressed interest in WRP, and almost 250,000 acres had been offered. The cost effectiveness of restoring each parcel of land was measured and ranked based on its easement and restoration cost compared with the expected effectiveness of the restoration, contribution to the surrounding ecological complex, and other benefits. Federal easement payments to states were greatest in California, where easement values were highest, and in Mississippi, where acreage accepted was large.

Despite the large response to the pilot WRP program, Congress provided no additional funding in fiscal 1993. However, President Clinton's fiscal 1994 budget proposal contained \$370 million for 450,000 new acres of wetland restoration, revitalizing the program. The House Appropriations Committee adopted a

## New Wetlands Policy Announced

The Clinton Administration unveiled a new wetlands policy as *Agricultural Outlook* approached press time. The new policy, announced August 24, will involve nine Federal entities, including USDA, Department of the Interior, Army of Corps of Engineers (Corps), and Environmental Protection Agency.

Exempted from regulation under Section 404 of the Clean Water Act are the 53 million acres of wetlands (mostly in the Midwest) that were converted to cropland prior to 1985. The plan also:

- makes USDA's Soil Conservation Service the lead agency for identifying wetlands on agricultural lands;
- continues use by all agencies of the 1987 Corps manual for wetlands delineation, pending completion of National Academy of Sciences study of the 1989 and 1991 interagency delineation manuals;
- increases emphasis on voluntary wetlands protection and restoration, and seeks to have the Wetlands Reserve Program (WRP) expanded in the 1995 farm bill;
- establishes an administrative appeals process for wetlands determinations and permit denials under 404;
- imposes deadlines for decisions on landowners' permit applications—e.g., the new regulations require Corps to make permit decisions within 90 days from date of public notice;
- provides guidance in order to make permit decisions more predictable.

recommendation of the Subcommittee on Agriculture to allocate \$44 million for 50,000 acres in fiscal 1994. The Senate included \$70 million for WRP in its budget. The House-Senate conference committee reduced the cap on WRP total acreage enrollment from the 1 million acres in the 1990 Farm Act to 330,000 acres by 1995, but extended enrollment to a minimum of 975,000 acres through 2000. The conference committee appropriated \$66.7 million for an additional 75,000 WRP acres in fiscal 1994.

A total of 55.6 million acres of cropland converted from former wetlands is potentially eligible for the 1994 program. Almost two-thirds of the eligible acreage is in the Lake and Corn Belt states, with more than 10 percent each in the Delta and Southeast.

## Conflicts Mount Over Wetlands Regulation

Controversy over recent changes in wetlands regulation—including the definition of wetlands developed in the 1989 Federal delineation manual and subsequent revisions in 1991 that narrowed that definition—delayed action on Clean Water Act (CWA) reauthorization provisions in 1992. Strong congressional sponsorship of bills both to weaken wetlands protection through regulatory reform and to maintain strong wetland protection, combined with normal election-year reticence to address major issues, are the primary reasons CWA debate was postponed to the 103rd Congress.

Both Congress and the Bush Administration responded to widespread public pressure for wetlands reform, and it is clear that some kind of regulatory reform is inevitable, despite the change in Administration. It is not clear, however, whether legislative action through CWA reauthorization is needed to accomplish this reform. Despite environmentalists' opposition to regulatory reform, an interagency task force led by the new Office on Environmental Policy is working on a new plan. Congressional advocates of both regulatory reform and stronger wetlands protection are prepared to proceed if the Administration effort fails to reconcile concerns about wetland regulatory reform.

What chain of events led to the present uneasy hiatus in wetland regulation? Despite a sometimes stormy evolution, wetlands regulation under Section 404 of the CWA had agreed on a modus operandi by the mid-1980's. In 1987, EPA asked the Conservation Foundation to convene a National Wetlands Policy Forum, and the forum's report recommended:

- a goal of "no net loss" of wetlands,
- incentives for private stewardship,
- a wetland restoration program, and
- regulatory reform, including improved wetlands delineation criteria and a consistent definition.

Some of the forum's recommendations were interpreted by Environmental Protection Agency (EPA) and the Army Corps of Engineers as favoring stricter implementation of existing regulations on wetlands development. The recommendation that all Federal agencies use a consistent definition of wetlands was addressed by the 1989 Federal interagency manual on wetland delineation by expanding the types of wetlands over which regulators assert jurisdiction.

By 1990, opposition to the aggressive field implementation of Federal wetlands policies had developed among farmers, developers, and small landholders, and was being expressed to Congress and the Bush Administration. Corps and EPA officials clarified agricultural exemptions that had, in fact, generally been in place. Routine review of the interagency wetland delineation manual was caught in the growing controversy, and

## Special Articles

### Most Acreage Accepted in Pilot Wetland Program Is in Mississippi and Louisiana

	Acres intended for bidding	Acres offered <sup>a</sup>	Acres accepted	Farms accepted	Acres per farm	Easement payments		
						Total	Per farm	Per acre
California	78,519	34,296	6,026	21	287	9,802	467	1.626
Iowa	45,068	27,889	5,096	83	61	4,881	59	958
Louisiana	119,323	69,913	14,075	43	327	6,907	161	491
Minnesota	33,296	13,119	706	10	71	640	64	907
Mississippi	115,726	64,957	14,885	47	317	8,355	178	561
Missouri	28,669	14,575	2,669	21	127	2,301	110	862
New York	3,005	496	72	5	14	183	37	2,525
North Carolina	25,587	15,299	4,713	6	785	2,934	489	623
Wisconsin	12,885	8,516	1,647	29	56	1,036	36	629
Total	462,078	249,059	49,888	265	188	37,038	140	742

1992 Pilot Wetlands Reserve Program

<sup>a</sup>Indicated by farmers in preliminary signup <sup>b</sup>Bids submitted by farmers following determination of eligibility and development of restoration plans.

led to major revisions in 1991. However, none of these efforts to moderate the new policies occurred soon enough or went far enough to head off rapidly coalescing opposition to regulation of wetlands.

Bolstered by successful cases in U.S. Claims Court and the prospect of a conservative majority in the Supreme Court, property rights interests targeted wetland regulation as an opening wedge in rolling back a wider array of regulation aimed at promoting the general welfare. Wetland regulation without compensation to landowners was portrayed as a "taking," proscribed under the Fifth Amendment to the Constitution.

### Congressional Bills Represent Divergent Approaches

Two members of Congress, Reps. Jim Hayes (D-GA) and Tom Ridge (D-PA), introduced regulatory reform legislation (H.R. 1330) addressing wetland delineation, compensation for critical wetlands, and regulatory responses for different types of wetlands. The Bush Administration responded on August 9, 1991, with a plan for accelerated regulatory reform, although little progress was made in implementing the plan prior to the 1992 Presidential election. Environmentalists countered with

### What Is a Wetland?

In general usage, wetlands and riparian areas are intermediate between land and water. Wetland scientists have developed more than 50 different definitions of wetlands. Defining wetlands has been controversial in the context of U.S. policy because of the implications for landowners who want to use and develop these areas, and environmentalists who want to preserve them.

Since 1977, the Federal government has used a three-part definition involving hydric soils, hydrophytic vegetation, and hydrology. According to the U.S. Army Corps of Engineers, wetlands are "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

The phrase "under normal circumstances" has been interpreted to mean that an area with wetland hydrology and soils remains a wetland, even when adapted vegetation has been

removed to make areas suitable for farming. While this definition has been generally accepted, criteria for delineating wetlands in the field on the basis of evidence of the characteristics in the three-part definition have not been agreed to as readily.

Examples of wetlands vary from obvious cases such as cattail marshes, peat bogs, and tidal sloughs, to prairie potholes and alluvial flood plains that are wet during only part of the year and may rarely have standing water. As the recent flooding in the Mississippi and Missouri basins shows, when some of these types of wetlands are wet, they can be very wet. The ecological and hydrologic functions and values of wetlands depend on a wide array of factors, including location, morphology, vegetation, and use of adjacent areas. Wetness alone is an inadequate indicator of the importance of wetlands, but is getting increasing scrutiny as the wetland debate becomes more contentious.

## How Much Cropland on Wetland Soils?

Hydric soils are those which in their undrained condition are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions. USDA developed a list of hydric soils for use in wetland delineation. Merging the hydric soil list with cropland records in the 1982 National Resources Inventory shows almost 48 million acres of land with hydric soils in the nine Midwest states affected by recent flooding.

More than 30 million acres of this land was cropland in 1982. Only 1.4 million acres of cropland on hydric soils in these states is still wet enough to be considered wetland, and about 200,000 acres of this land shows some evidence of drainage. Most cropland on hydric soils (29 million acres) was converted from wetlands through clearing and drainage. Much of this prior converted hydric cropland would be eligible for the Wetland Reserve Program, which is focused on restoring cropped former wetlands to wetland condition.

### Cropland on Wetland Soils in Upper Midwest, 1982

	Cropland				
	Former wetlands	Current wetlands		Total current & former wetlands (hydric soils)	All rural land with hydric soils
		Not drained	Drained		
Acres					
Illinois	7,239,600	176,500	78,000	7,494,100	8,723,300
Iowa	6,363,700	2,900	3,400	6,370,000	7,228,300
Minnesota	8,539,000	49,300	10,200	8,599,400	16,292,000
Missouri	3,669,000	2,400	0	3,671,400	4,982,400
Wisconsin	630,700	73,900	85,500	790,100	3,612,400
Kansas	523,500	7,600	0	531,100	736,500
Nebraska	607,300	35,100	1,300	643,700	1,486,700
North Dakota	715,100	543,900	10,900	1,269,900	2,547,200
South Dakota	469,800	303,900	18,200	791,900	2,215,300
Total	28,758,600	1,195,500	207,500	30,161,600	47,824,100

Rep. Don Edwards' (D-CA) bill, introduced as H.R. 4255 (reintroduced in the 103rd Congress as H.R. 350).

The Hayes/Ridge bill has 120 cosponsors and proposes four major reforms of Section 404 to address landowners' and wetland users' concerns—reforms that could substantially reduce the amount of land defined as wetlands.

First, evidence of the three wetland indicators—wetlands hydrology, hydrophytic vegetation, and hydric soils—would be required during the growing season. Wetlands hydrology would be defined as the presence of surface flooding at least 21 consecutive days during the growing season in a majority of years. This is significantly more than the 7 days of saturation required in the 1989 manual, which had been the source of many complaints that dry land was being regulated. The "growing season" would be shortened by basing the definition on first and last frost dates, rather than soil temperature, effectively excluding some flooding periods from the growing season.

Second, equal treatment of delineated wetlands would be dropped in favor of three wetlands classes with different regulatory responses. Type A wetlands, defined as those critical to the long-term conservation of their ecosystem, would generally be denied dredge and fill permits under Section 404, and would be eligible for compensation at fair market value. Abundant, marginal, or degraded Type C wetlands would require no permit and would be subject to none of the mitigation requirements (substitution of wetlands) currently required. Type B wetlands would be subject to the "avoid, minimize or compensate" rules currently required in the 404 program, although alternative mitigation possibilities would be provided.

Third, H.R. 1330 provides for state assumption of the wetland regulation program, and specifies the conditions and terms for a state program. Fourth, Federal wetland regulation would be "unified" under the authority of the Army Corps of Engineers, eliminating EPA's oversight role. In addition to regulatory reform measures, the bill also expands the scope of regulation to include drainage, channelization, and excavation, and explicitly recognizes Section 404 as a wetland regulatory program.

## Special Articles

### Wetland Regulatory Reform Proposals—A Comparison

Item	H.R. 1330 Hayes/Ridge	H.R. 350 Edwards	Bush Administration plan
Delineation	Requires all 3 indicators: hydrology, vegetation, & soils; surface saturation for 21 days	Requires consistency with a National Academy of Sciences study of 1989 and 1991 manuals, under EPA	Proposed 1991 manual in response to public comments on 1989 manual
Categorization	Three classes: A-Critical B-Significant C-Limited or marginal	Expedited wetland mapping; funding for delineation training	Limited number based on function, value, scarcity
Regulatory response	By class: A-Generally denied permits B-Sequencing applies C-No permit required	Fast track minor permits; reduce paperwork & delays	6-month approval; sequencing for highest category; general permits for low-value; mitigation required
Regulatory scope	Expands to include drainage; exempts normal ag practices, manmade wetlands, prior converted cropland is Type C	Expands to prohibit discharge of pollutants or other alteration of navigable waters, including drainage; exempts normal ag practices, manmade wetlands; requires rule on prior converted cropland	Supports legislation to expand to drainage & other activities; exempts manmade wetlands, normal ag practices, & prior converted cropland
State program assumption	Specifies conditions for state programs	None	Encourages flexibility for state programs that achieve 404-level protection including wetlands adjacent to navigable water
General permits	Allows Corps to grant general permits with reporting and mitigation	Limits Corps permit authority; clarifies general permit program and requires reporting of effects of uses	Encourages use of state general permits
Mitigation banking & restoration	Corps must establish a bank in each state	Establishes restoration pilot project; endorses Wetland Reserve Program; requires study of compensatory mitigation effectiveness	Requires mitigation banking that allows substitution between wetland categories
Coordination	"Unified" in Corps	Interagency agreements	Requires guidance for better Federal coordination
Compensation	Type A wetland owners eligible for fair market value of land	Tax deductions & exclusions	No provision

H.R. 350, which is favored by environmentalists and has 83 co-sponsors, takes a different approach to expediting wetland regulation. The bill calls for cooperation among Federal agencies to minimize duplication, paperwork, and delay; a "fast track" for minor permits for activities involving less than 1 acre of wetlands; and codifying exemptions for agriculture and other activities and exclusion of waters that had been specifically exempted. In addition, H.R. 350 would require an assessment of the personnel and funding required to administer the program and would authorize funds for delineator training, public education and outreach, and completion of the Fish and Wildlife Service National Wetland Inventory mapping program.

The scope of the Section 404 program would be widened under H.R. 350 to include discharges of pollutants and any other alteration of navigable waters, except as permitted. The Corps' authority to issue general permits would be curtailed, and reports on the impact of general permits required.

Finally, amendments would make it easier for citizens to sue for enforcement of Section 404 on observed violations. The bill endorses USDA's WRP program and would also establish a pilot program to identify sites, methods, and evaluation techniques for a Federal program to restore wetlands. New in the 1993 version of the bill is charitable deduction status for donations of wetlands to stewardship trusts, and tax exclusion for income earned from compatible wetland uses such as fishing and hunt-

ing leases and controlled grazing or haying. These provisions partly counter H.R. 1330's compensation provisions.

This year's heightened concern over wetlands problems provides a backdrop to the debate over these two bills, and may serve as a catalyst for expanding the WRP or other innovative programs for voluntary wetlands restoration.

(Ralph E. Heimlich (202) 219-0402) and Dwight M. Gadsby (202) 219-0460/ AO

#### September Releases from USDA's Agricultural Statistics Board

The following reports are issued at 3 p.m. Eastern time on the dates shown

##### September

- 1 Broiler Hatchery
- 2 Walnut Production
- 3 Dairy Products
- Egg Products
- Poultry Slaughter
- 7 Crop Progress (after 4 p.m.)
- Farm Production Expenditures, 1992
- 8 Broiler Hatchery
- 9 Cotton Ginnings
- Crop Production
- 13 Crop Progress (after 4 p.m.)
- 14 Turkey Hatchery
- 15 Broiler Hatchery
- Milk Production
- 17 Cattle on Feed
- Vegetables
- 20 Crop Progress (after 4 p.m.)
- 21 Catfish Processing
- 22 Broiler Hatchery
- Cold Storage
- Potatoes
- 23 Citrus Fruits
- Hop Stocks
- 24 Cotton Ginnings
- Eggs, Chickens, & Turkeys
- Livestock Slaughter
- 27 Crop Progress (after 4 p.m.)
- 28 Peanut Stocks & Processing
- 29 Agricultural Prices
- Broiler Hatchery
- 30 Grain Stocks
- Hogs & Pigs



## China 2000: A Major Player In the Ag Trade Arena

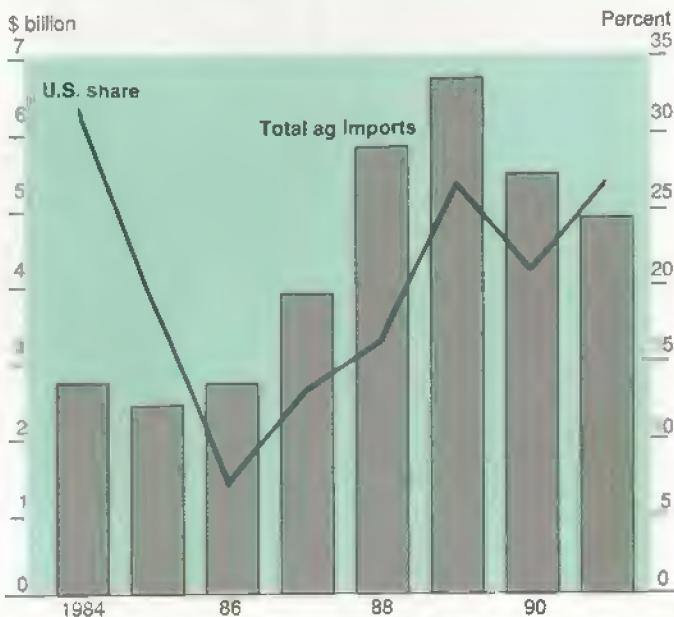
**C**hina, the world's largest producer and consumer of agricultural products, is expected to become an increasingly large player in the global market economy in the 1990's. China's agricultural trade is expected to grow rapidly in response to internal measures to broaden economic reforms as the country moves toward a more market-oriented economy.

The growth in farm trade could be erratic. In the short term, large harvests plus removal of consumer price subsidies on grains and vegetable oils in China are reducing wheat and cotton imports and spurring corn exports at the expense of U.S. exports to East Asia. But economic reforms will stimulate income growth and bolster consumer demand for agricultural products in the long term.

During the last 14 years, the U.S. has been China's major supplier of agricultural products. Except for the period 1986 to 1988, the U.S. supplied over 20 percent of the value of China's agricultural imports. Wheat is China's largest agricultural import, accounting for over 40 percent of the total in the period 1983-90. In 1991, the U.S. supplied 34 and 63 percent of China's wheat and cotton imports.

## Special Articles

### U.S. Market Share of China's Ag Imports Has Fluctuated Widely



Source: Summary Surveys of China's Customs Statistics.

However, the value of U.S. agricultural exports to China fluctuated widely during the 1980's, ranging from a high of \$2.3 billion in 1980 to a low of \$57 million in 1986. U.S. agricultural exports to China will continue to fluctuate in the 1990's as well, with export prospects higher later in the decade.

### 1980's Reforms Set the Stage

In the 1980's, China's government carried out reforms which relaxed restrictions on its trade policies and which have promoted trade. For example, local governments were allowed to retain a portion of foreign exchange earnings and freely trade nonbasic agricultural products. China's total imports and exports more than quadrupled between 1979 and 1992, growing at 11 and 13 percent annually.

Economic reforms in rural areas have stimulated agricultural productivity, and China has enjoyed an agricultural trade surplus since 1983. Most of the country's trade growth, however, occurred outside the agricultural sector. The agricultural share of imports declined from 27 percent in 1979 to less than 7 percent in 1992, while the agricultural share of exports decreased from 22 to 13 percent.

China's agricultural trade in the 1980's was characterized by wide fluctuations in commodity composition, which coincided with changes in agricultural and trade policies. In the early 1980's, the government imported more grains, particularly wheat, for urban areas, allowing farmers to retain more grains for their own use and permitting increased regional specialization.

By 1984, agricultural production had increased sharply and large surpluses had accumulated. Starting in the mid-1980's, the government ordered a drastic cut in grain imports, and vigorously expanded agricultural exports, particularly corn, to Asian markets. Meanwhile, the liberalization of nonstaple products, along with rising urban demand, encouraged the production of nonstaples as their profit margins rose relative to grains and oils. This led to lower incentives to grow grain and oilseed crops, and grain production stagnated. When grain production fell below state targets for 4 years in a row from 1988, the government decided to reimpose certain controls.

The austerity measures imposed in 1989-90, including pricing policies and administrative measures to increase grain production, led to large grain surpluses and an 8-percent decline in agricultural imports in 1990, and helped set the stage for the new economic reforms.

### Trade Policy Reforms

In 1991 and 1992, the government largely eliminated direct price subsidies for grain and edible oils for urban residents, indicating that it was ready for wider marketing reforms. In fact, by the end of April 1993, most of China's urban areas had abolished grain and edible oil rationing coupons. The grain and vegetable oil marketing reforms might have a significant impact on global and U.S. agricultural trade.

Along with reforms affecting the domestic distribution of staple foods, China appears to have adopted a more open trade policy. The Chinese government has taken measures to ease import restrictions in recent years in response to two foreign policy objectives: to join the General Agreement on Tariffs and Trade (GATT), and to ease tensions related to trade surpluses with trading partners.

The Chinese government has announced that it will take the following steps to relax its trade policies:

- reduce average import tariffs from 45 to 30 percent;
- eliminate import license requirements by two-thirds within 3 years;
- abolish the import regulatory tax (a 20- to 80-percent surcharge) on high-value goods;
- publish any regulations before they are actually implemented.

In the 301 Agreement with the U.S. reached in October 1992, China agreed to remove many of its nontariff barriers such as quotas, licensing requirements, high tariffs, and quarantine measures that are not scientifically based.

U.S. agricultural trade would benefit from China's membership in the GATT. Once China is a GATT member, it will have to open its markets to all member countries. Even if China negotiates to adopt restrictive measures available to developing countries in order to limit access of agricultural products, such measures will at least be more transparent.

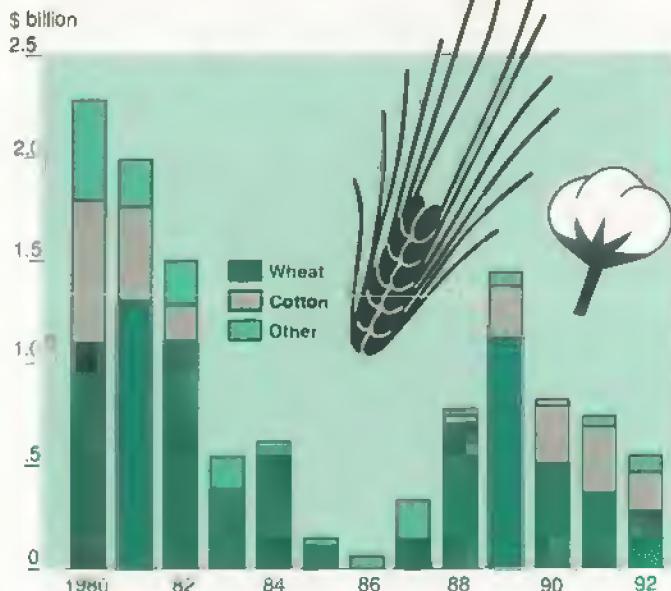
## Imports To Spur Trade In Base Scenario

Under a "base scenario," generally assuming a continuation of past trends and economic relationships, USDA's Economic Research Service projected last year that China will be a small net exporter of rice and a growing net importer of wheat in the 1990's. The rapid growth in feed demand associated with maintaining self-sufficiency in meats is also expected to lead to a sharp decline in corn exports. Surpluses of cotton are also projected to diminish due to rising domestic and export demand for cotton-based textiles.

**Rice.** China's most important staple is rice, now accounting for about 22 percent of its total crop sown area, with production fluctuating between 127 and 140 million tons (milled) between 1986 and 1991. Current per capita consumption of rice is over 120 kilograms (milled), accounting for more than 25 percent of protein intake in China.

However, economic growth over the next decade is expected to reduce the role of rice in the diet—as in Taiwan during the period of its high growth in per capita income between 1965 and 1985. In addition, the removal of price support subsidies for rice consumption is likely to reduce rice feeding to livestock.

### Wheat and Cotton Have Been Dominant U.S. Ag Exports To China



"Other" includes oilseeds, cattle hides, and tobacco.

Source: Bureau of the Census.

Overall, income and price effects will lead to a decline in per capita use which population growth will not offset, causing total rice consumption to fall by the turn of the century.

While total rice use declines, higher incomes are projected to increase demand for different and improved rice varieties—particularly japonica rice. Evidence of Chinese preference for japonica rice can be seen in the northern region where production has almost doubled to 17.7 million tons over the last decade, while production and use of indica rice remains about the same. The consumption and production of japonica rice will continue to increase at the expense of indica rice. Rice area is projected to decline slightly. Within the remaining rice area, more and more will be converted to production of lower yield but higher quality japonica varieties.

**Wheat.** China's second-largest crop, wheat, accounts for about 20 percent of total crop sown area. Wheat is also China's most important agricultural import, accounting for about 50 percent of the value of total farm imports between 1979 and 1992. China's wheat sector accounts for about 16 percent of world wheat output and between 6 and 14 percent of world wheat imports in the 1980's.

Population and income growth are projected to cause the demand for wheat to outstrip supply, requiring larger imports. China will also likely become more quality conscious. The state trading agency, CEROIL, is making quality a more important determinant for wheat purchases. For example, joint-venture mills in Guangdong have been permitted to import wheat with specific milling qualities.

**Corn.** About 15 percent of total crop sown area in China is corn, China's most important feed grain. In recent years, corn production has increased at a much faster rate than other grains in response to increased feed demand, and yield growth is the highest among all grain crops. Yield is projected to grow at 1.4 percent per year, reaching nearly 5 tons per hectare in the year 2000.

Manufactured feed supplies, although increasing rapidly since 1985, accounted for less than 25 percent of total livestock feed in 1992. High on-farm grain stocks—largely rice—have supported rapidly growing livestock production. But eliminating price subsidies on urban grain consumption is likely to raise the cost of backyard livestock production and encourage a faster growth of manufactured feed industry. With increased use of manufactured feeds, the demand for corn and soybeans will increase, and feed use of rice will decrease. As a result, China's net exports of corn are projected to decrease from over 6 million tons in 1989-91 to less than 3 million in the year 2000.

Although China's corn exports accounted for less than 5 percent of world corn exports between 1988 and 1990, China is a significant player in Asian markets. With increasing autonomy of China's regions, northern China likely will export corn to the neighboring East Asian countries of Russia, South Korea, North Korea, and Japan, while southern China will import U.S. corn to support its expanding livestock industry. During the 1990's,

## Special Articles

### MFN Status: Implications For U.S.-China Trade

Until China becomes a GATT member, a key recurring issue affecting U.S.-China trade is U.S. renewal of China's most favored nation (MFN) status. Denial of MFN status to China, or attaching conditions that reduce textile quotas, could have serious repercussions for China's economy and for U.S. exports to China. The denial of MFN status could affect U.S. agricultural trade indirectly by reducing China's hard currency earnings and its ability to finance imports, and directly if China carries out threats to retaliate by limiting U.S. imports.

#### *Loss of China's Foreign Exchange*

Without MFN status, China would either lose sales in the U.S. market or would have to accept lower after-duty prices to offset increased import tariffs—or a combination of the two. For China, the result would be reduced foreign exchange earnings and a reduced ability to import goods. This effect is a far more serious threat to U.S. exports to China than any direct retaliation.

Average tariff rates without MFN rise to around 47 percent instead of 8 percent. With a total import value of \$26 billion in 1992, this would mean that on average, import duties would increase from \$2 billion to over \$12 billion. This would translate into a 34-percent increase in U.S. domestic prices of goods imported from China. China would lose a significant share of the U.S. market if it did not adjust its pre-duty prices. The actual loss of sales and foreign exchange earnings would depend on the demand elasticities of these goods in the U.S. market and actual pricing decisions.

#### *The Effect of Retaliation*

The Chinese government threatens to limit U.S. access to its markets in retaliation for denial of MFN status or the attachment of conditions to renewal. U.S. exports of advanced technology goods and services would bear the brunt of retaliation.

Retaliation would have little long-term effect on total U.S. wheat and cotton exports because there are many alternative export markets. But retaliation could cut U.S. agricultural exports in the short term because global stocks of wheat and cotton are high. If China were to shift its sources of wheat and cotton imports as a result of the denial of MFN status, other suppliers could likely meet much of this added demand from their current stocks.

However, U.S. sales to China are likely to decline in the short term even if China retains MFN status, because China's wheat production reached 101.6 million tons in 1992 and because the removal of price subsidies will cause wheat consumption to decrease. As a result, China's total wheat imports are likely to decrease.

Within China, the removal of MFN status could strengthen the hand of hard-liners in reestablishing centralized control over the market-oriented coastal areas of South China. If reform is interrupted, China's economic growth would slow.

reduced net corn exports, and growing imports by southern China, will create market opportunities for the U.S. and other exporters to China.

**Oilseeds.** China now accounts for 15-18 percent of world oilseed production. Its major oilseed crops are peanuts, rapeseed, cotton, sunflowerseed, and soybeans. Except for peanuts, China's share of oilseed trade has been very small. In response to increased meat and vegetable oil output, more acreage will shift into soybean and rapeseed production. However, increasing demand is projected to sharply reduce exportable surpluses of both soybeans and soymeal by 2000.

**Cotton.** After grains, cotton is the most important agricultural commodity produced in China, accounting for 4 percent of total crop area. Cotton production increased rapidly to support fast-growing rural textile enterprises (2.2 million tons in 1978 and 5.7 million in 1991) which have provided a fourth of total

export value in recent years. China was a major importer of cotton in the early 1980's, and the government has continued to use its pricing policy to increase domestic production. For most of the second half of the 1980's, China was a net cotton exporter. Since 1989, China has again become a net importer.

Continued growth in the textile industry will cause demand for cotton to increase. However, the high stock/consumption ratio will curb import demand for some time into the future, with China likely remaining a minor net exporter or a minor net importer in the 1990's.

**Meats.** Pork accounts for over 80 percent of meat production and consumption in China. Economic reforms have doubled production over the last decade. China's share of world pork production has continued to increase, rising from about 15 percent in 1980 to 30 percent currently.

The base projections assume the desire to diversify meat consumption, resulting in faster growth in the poultry and beef sectors than in pork. While pork consumption is projected to increase 25 percent by the year 2000, poultry and beef consumption should more than double from current levels. For all meats, domestic production is expected to increase sufficiently to support higher consumption over the next decade.

## New Trade Opportunities Under Alternate Scenario

Although the base projections recognized changes in consumption patterns during economic growth, they did not account for effects of more fundamental changes possible in China's agricultural economy during the 1990's. An alternate scenario attempts to account for the potential impact of more fundamental changes in underlying economic parameters by examining the aggregate impacts of: 1) changes in China's food consumption patterns in the 1990's according to patterns observed in Taiwan during the 1970's and 1980's, 2) continuing government concern for maintaining food self-sufficiency, and 3) the potential for agricultural production to adjust to changes in the pattern of food demand.

Under this scenario, the new set of demand parameters results in a faster projected decline in rice consumption compared with the base scenario. This scenario allows land to shift out of rice cultivation and into wheat, corn, soybeans, and cotton in order to minimize grain and oilseed imports.

There are two reasons why China is likely to make adjustments in land use to minimize agricultural imports. First, maintaining grain self-sufficiency has always been a top priority in China. As a result, to encourage production, domestic wheat prices have been supported at a higher level than other grains. Second, given the size of China's consumption and production, even small changes would have a large impact on international trade.

Rice consumption is projected to decline as per capita income increases and urban subsidies are removed. Unless China makes adjustments in rice production, the amount of rice available for export would depress world prices sharply. Given the inelastic demand for rice in the world market, total foreign earnings from rice exports could fall despite a large increase in exports. On the other hand, the increase in China's demand for corn, soybean, and cotton imports could push world prices higher than the cost of reallocating land resources to their production.

Under the alternate adjustment scenario, it is assumed that the additional feed grains required for higher meat production will come from manufactured feed. The feed grain-to-meat conversion ratios for increased livestock production are assumed to be 4.35 for pork, 8 for beef, and 2.6 for poultry. Corn and soybean meal are assumed to account for 35 percent and 8 percent of

### In Alternate Scenario, China Becomes Net Importer of Corn and Soybeans

	1989-91 average	Scenarios in 2000	
		Base	Alternate
<b>Rice</b>			
Area (mil ha)	32.8	32.6	26.6
Yield (met tons/ha)	4.2	4.1	4.5
Production	138.3	134.3	121.8
Net imports	0.1	-0.6	0
Consumption	138.3	135.5	121.8
<b>Wheat</b>			
Area (mil ha)	30.5	30.7	33.3
Yield (met tons/ha)	3.1	3.6	3.1
Production	95.0	109.3	110.0
Net imports	13.3	17.4	26.1
Consumption	108.3	126.1	136.1
<b>Corn</b>			
Area (mil ha)	21.1	21.5	24.5
Yield (met tons/ha)	4.3	5.0	4.9
Production	91.5	106.4	119.2
Net imports	-6.4	-2.8	5.4
Consumption	81.0	103.7	124.6
<b>Soybeans</b>			
Area (mil ha)	7.6	8.2	8.2
Yield (met tons/ha)	1.4	1.5	1.5
Production	10.3	12.1	12.2
Net imports	-0.9	-0.3	5.1
Consumption	9.5	17.3	17.8
<b>Soymeal</b>			
Production	3.2	5.3	8.0
Net imports	-1.8	-0.6	2.0
Consumption	1.4	4.7	10.0
<b>Cotton</b>			
Area (mil ha)	5.8	6.2	6.6
Yield (met tons/ha)	0.8	0.9	0.9
Production	4.7	5.3	6.0
Net imports	0.3	-0.3	-6.0
Consumption	4.3	5.5	12.0
<b>Pork</b>			
Production	22.9	28.7	33.0
Net imports	0.1	-0.4	0
Consumption	22.7	28.3	33.0
<b>Poultry</b>			
Production	3.1	6.7	5.4
Net imports	0.5	-0.1	0
Consumption	2.7	6.6	5.4
<b>Beef</b>			
Production	1.3	2.7	2.3
Net imports	0.1	-0.3	0
Consumption	1.2	2.4	2.3

Production, net imports, and consumption are in million metric tons  
Base: continuation of past trends in yields, population and income growth, and food consumption  
Alternate: greater adjustments than in base scenario in food consumption (based on changes in Taiwan) and crop area

Source: China's Statistical Yearbook, various issues

## Special Articles

### China's New Reporting Method Improves Trade Statistics

China has recently changed its method for recording and reporting trade statistics, which will result in more consistency between U.S. and China trade statistics. In 1992, China's Customs Statistics showed a trade balance of \$306 million in favor of the U.S., while U.S. Census statistics indicated a U.S.-China trade balance of \$18.2 billion in favor of China. China's sales to the U.S. were only \$7.5 billion according to China's source, compared with \$25.7 billion of U.S. imports from China reported by the U.S. Bureau of the Census.

The primary factor in the discrepancy between China and U.S. trade statistics is that Hong Kong often serves as transshipment port for some of China's re-exports, and until recently China had listed Hong Kong as the final destination. Beginning in the first half of 1993, China has no longer recorded Hong Kong as the importing country for goods that are transshipped through Hong Kong.

Other factors have also caused China and U.S. trade statistics to diverge, but they play a relatively small role in the discrepancies. These factors include different methods of valuation, time lags in currency conversions, differences in the recording systems, and recording errors from both countries.

manufactured feed. Income elasticities of nonfeed demand for corn and soybeans are assumed to be zero. The derived income elasticities are 0.35 for corn and 0.47 for soybeans.

Without shifting land out of rice production, China would have 27 million tons (from 6 million hectares) of indica rice available for export by the year 2000, while importing roughly 35 million tons of wheat, 15 million tons of corn, 6 million tons of soybeans, and 2.5 million tons of cotton. In the alternate adjustment scenario the projected 6-million-hectare surplus in rice sown area is shifted into production of wheat, corn, soybeans, rapeseed, and cotton.

The surplus rice area is assumed to be allocated to alternate crops according to their shares of total cropped area. Thus, rice production is projected to decline at the same pace as rice consumption, and area is shifted to other crops. Rice yield growth

under the alternate scenario is modest, despite a significant decrease in sown area, because the lower yielding japonica varieties will account for an increasing proportion of rice area.

With 3 million hectares of surplus rice land shifted to corn, an additional 9.4 million tons of corn would be produced. Projected corn imports in this scenario are 5.4 million tons in the year 2000. The shift of 2.6 million hectares of surplus rice area into wheat boosts production and holds wheat imports to about 26 million tons.

In the alternate adjustment scenario, soybean imports in the year 2000 rise to 5.1 million tons and soymeal imports to 2 million tons, even with 0.7 million hectares of rice area reallocated to producing about 1 million tons of additional soybeans. About 0.5 million hectares of surplus rice area are converted to producing cotton, but cotton imports may rise to a projected 1 million tons by the year 2000.

### 2000 & Beyond

China's transformation from a centrally planned to a more market-oriented economy will stimulate income growth, which will rapidly expand consumer demand for agricultural products.

In the short term, removal of China's urban price subsidies is likely to have an adverse effect on U.S. agricultural exports to China as consumption declines and stocks grow. Decreased per capita food grain consumption could significantly reduce the need for grain stocks for food security reasons, making more grain available for export in the near term.

In the long term, China could be a major market for U.S. soybean and oilseed exports. China's corn exports are projected to decline sharply, and the U.S. share of corn exports to East Asia is likely to increase, benefiting from China's economic growth.

China's government is also gradually relinquishing its monopoly power over exporting and importing oilseeds and products. With the erosion of CEROIL's monopoly power, local trade companies in the surplus oilseed regions of northeastern China will export directly to neighboring countries. Exports of oil meals from joint-venture feed mills in the northeast will also likely increase. On the other hand, import demand for oilmeals in the southeastern regions with rapidly growing livestock sectors will increase and provide an opportunity for the U.S. to export oilmeals and oilseeds.

/Shwu-Eng Webb (202) 219-0610/ AO

## USDA's Newest Series

# Issues for the 1990's

This new agricultural series offers over 80 timely factsheets organized into these categories:

- Trade
- Conservation
- Commodity Programs
- Marketing
- Food and Nutrition
- Rural Economy
- Environment
- Technology

These reports streamline research topics, graphically present the latest USDA data and analyses, and target the most important agricultural issues you'll face in this decade.

Each 2-page factsheet gives you the information you need in an efficiently organized format. You'll receive the first set of reports in an attractive 3-ring binder. You'll receive future reports as they are released and an updated index to help you keep your binder up-to-date. All this for only \$24.50. For foreign addresses (includes Canada), the price is just \$31.

To order, just dial ERS-NASS at 1-800-999-6779 (toll free in the U.S. and Canada), and ask for *Issues for the 1990's* (ISSUE 90). Other areas, please call 1-703-834-0125.

### Interested in Electronic Copies?

We'll be releasing a set of diskettes containing all reports in *Issues for the 1990's*. The set will be divided into the 8 topic areas to be fully compatible with the notebook. For more information, call 1-202-219-0512. Or, send your name, address, and daytime phone number to:

Electronic Issues  
1301 New York Ave., NW.  
Room 237-H  
Washington, DC 20005-4789

We'll send you information on the electronic series when it becomes available.



# Statistical Indicators

## Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1992		1993					1994	
	IV	Annual	I	II	III F	IV F	Annual F	I F	Annual F
Prices received by farmers (1977=100)	137	140	140	143	140	—	—	—	—
Livestock & products	157	157	162	167	162	—	—	—	—
Crops	117	121	117	119	118	—	—	—	—
Prices paid by farmers, (1977=100)									
Production items	175	174	176	178	—	—	—	—	—
Commodities & services, interest, taxes, & wages	192	191	194	197	—	—	—	—	—
Cash receipts (\$ bil.) 1/	163	169	164	—	—	—	—	—	—
Livestock (\$ bil.)	89	86	86	—	—	—	—	—	—
Crops (\$ bil.)	73	83	78	—	—	—	—	—	—
Market basket (1982-84=100)									
Retail cost	139	138	141	—	—	—	—	—	—
Farm value	104	103	105	—	—	—	—	—	—
Spread	158	157	160	—	—	—	—	—	—
Farm value/retail cost (%)	26	26	26	—	—	—	—	—	—
Retail prices (1982-84=100)									
Food	139	138	140	141	—	—	—	—	—
At home	137	137	139	140	—	—	—	—	—
Away from home	142	141	142	143	—	—	—	—	—
Agricultural exports (\$ bil.) 2/	11.8	42.4	11.6	10.3	8.8	11.6	42.5	—	—
Agricultural imports (\$ bil.) 2/	6.1	24.3	6.4	6.5	6.0	6.3	25.0	—	—
Commercial production									
Red meat (mil. lb.)	10,379	40,795	9,716	9,993	10,627	10,583	40,919	10,305	42,175
Poultry (mil. lb.)	6,644	26,398	6,542	6,982	7,155	6,905	27,583	6,800	28,740
Eggs (mil. doz.)	1,501	5,883	1,458	1,471	1,485	1,520	5,934	1,480	5,990
Milk (bil. lb.)	37.2	151.7	37.8	39.6	37.0	37.2	151.2	38.4	154.9
Consumption, per capita									
Red meat and poultry (lb.)	53.6	208.4	50.5	51.2	53.8	54.4	209.8	52.1	214.4
Corn beginning stocks (mil. bu.) 3/	2,738.6	—	1,100.3	7,906.4	5,878.2	3,709.4	—	—	—
Corn use (mil. bu.) 3/	1,641.6	7,916.1	2,674.1	2,228.8	1,971.2	1,560.9	8,435.0	—	—
Prices 4/									
Cholce steers—Neb. Direct (\$/cwt)	75.86	75.36	80.65	79.78	71-75	71-77	75-78	71-77	71-77
Barrows & gilts—IA, So, MN (\$/cwt)	42.48	43.03	44.92	47.59	44-48	39-45	44-47	39-45	41-47
Broilers--12-city (cts./lb.)	53.3	52.6	53.1	55.8	53-57	49-55	52-55	49-55	50-56
Eggs—NY gr. A large (cts./doz.)	71.4	65.4	75.6	73.4	72-76	72-78	73-78	68-74	67-73
Milk—all at plant (\$/cwt)	13.10	13.09	12.33	12.8	12.30-	12.55-	12.50-	12.00-	11.50-
Wheat—KC HRW ordinary (\$/bu.)	3.73	3.91	3.82	3.48	—	—	—	—	—
Corn—Chicago (\$/bu.)	2.12	2.41	2.18	2.27	—	—	—	—	—
Soybeans—Chicago (\$/bu.)	5.52	5.68	5.63	5.84	—	—	—	—	—
Cotton—Avg. spot 41-34 (cts./lb.)	50.4	53.9	55.2	55.6	—	—	—	—	—
	1985	1986	1987	1988	1989	1990	1991	1992	1993 F
Farm real estate values 5/									
Nominal (\$ per acre)	713	640	599	632	661	668	681	684	700
Real (1982 \$)	657	568	518	530	533	517	505	487	486

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3/ Sept.-Nov. first quarter; Dec.-Feb. second quarter; Mar.-May third quarter; Jun.-Aug. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages, Jan.-Dec. 5/ 1990-92 values as of January 1. 1986-89 values as of February 1. 1984-85 values as of April 1. F = forecast, — = not available.

## U.S. &amp; Foreign Economic Data

Table 2.—U.S. Gross Domestic Product &amp; Related Data

	Annual			1992			1993	
	1990	1991	1992	II	III	IV	I	II P
\$ billion (quarterly data seasonally adjusted at annual rates)								
Gross domestic product	5,522.2	5,677.5	5,950.7	5,902.2	5,978.5	6,081.8	6,145.8	6,206.9
Gross national product	5,542.9	5,694.9	5,961.9	5,909.3	5,992.0	6,086.8	6,155.1	—
Personal consumption expenditures	3,748.4	3,887.7	4,095.8	4,057.1	4,108.7	4,194.8	4,234.7	4,301.0
Durable goods	464.3	448.1	480.4	470.5	482.5	499.1	498.8	519.3
Nondurable goods	1,224.5	1,251.5	1,290.7	1,277.5	1,292.8	1,318.6	1,320.8	1,329.7
Clothing & shoes	206.9	209.0	221.8	217.4	224.3	229.0	225.5	227.1
Food & beverages	601.4	617.7	630.9	623.2	627.3	645.2	644.1	649.1
Services	2,059.7	2,190.1	2,324.7	2,309.0	2,333.3	2,377.1	2,415.1	2,452.0
Gross private domestic investment	799.5	721.1	770.4	773.2	781.8	804.3	844.0	831.3
Fixed investment	793.2	731.3	766.0	765.1	768.6	794.0	809.0	825.0
Change in business inventories	6.3	-10.2	4.4	8.1	15.0	10.3	34.9	6.3
Net exports of goods & services	-68.9	-21.8	-30.4	-37.1	-36.0	-40.5	-49.4	-49.9
Government purchases of goods & services	1,043.2	1,080.5	1,114.9	1,109.1	1,124.2	1,123.3	1,116.8	1,124.4
1987 \$ billion (quarterly data seasonally adjusted at annual rates)								
Gross domestic product	4,877.5	4,821.0	4,922.6	4,892.4	4,933.7	4,990.8	4,999.9	5,019.5
Gross national product	4,895.9	4,836.4	4,932.8	4,899.1	4,945.5	4,995.9	5,008.5	—
Personal consumption expenditures	3,260.4	3,240.8	3,314.0	3,288.5	3,318.4	3,359.8	3,366.5	3,398.1
Durable goods	439.3	414.7	439.1	430.0	439.8	454.4	453.5	468.8
Nondurable goods	1,056.5	1,042.4	1,054.1	1,045.8	1,052.0	1,069.4	1,062.2	1,068.6
Clothing & shoes	185.9	181.3	188.3	184.4	190.8	193.7	188.2	190.8
Food & beverages	520.8	515.8	518.4	513.5	514.3	526.7	522.6	523.9
Services	1,764.6	1,783.7	1,820.7	1,812.9	1,828.6	1,836.2	1,850.6	1,860.7
Gross private domestic investment	738.1	661.1	712.6	713.6	724.9	743.1	784.0	771.1
Fixed investment	732.9	670.4	707.6	705.9	710.0	733.3	750.5	763.0
Change in business inventories	8.2	-9.3	5.0	7.8	15.0	9.8	33.5	8.2
Net exports of goods & services	-51.8	-21.8	-41.8	-43.9	-52.7	-49.0	-70.3	-69.9
Government purchases of goods & services	929.9	941.0	937.8	934.2	943.0	936.8	919.6	920.1
GDP implicit price deflator (% change)	4.3	4.1	2.6	2.7	2.0	2.3	3.3	2.6
Disposable personal income (\$ bil.)	4,042.9	4,209.5	4,430.8	4,411.8	4,433.2	4,517.3	4,581.7	4,624.5
Disposable per. income (1987 \$ bil.)	3,518.5	3,509.0	3,585.1	3,578.0	3,580.5	3,618.2	3,642.3	3,653.7
Per capita disposable per. income (\$)	16,174	16,658	17,346	17,297	17,332	17,610	17,818	17,937
U.S. population, total, incl. military abroad (mil.)	14,068	13,886	14,035	14,021	13,998	14,105	14,165	14,172
Civilian population (mil.)	249.9	252.7	255.5	255.0	255.7	256.5	257.1	257.7
	Annual			1992			1993	
	1990	1991	1992	June	Mar	Apr	May	June
Monthly data seasonally adjusted								
Industrial production (1987=100)	106.0	104.1	106.5	106.0	110.1	110.4	110.3	110.1
Leading economic indicators (1982=100)	143.8	143.4	148.9	148.8	151.7	152.0	151.4	151.6
Civilian employment (mil. persons)	117.9	116.9	117.6	117.5	116.6	118.4	119.3	119.2
Civilian unemployment rate (%)	5.5	6.7	7.4	7.7	7.0	7.0	6.9	7.0
Personal income (\$ bil. annual rate)	4,664.2	4,826.3	5,058.1	5,038.5	5,260.8	5,271.0	5,298.7	5,296.2
Money stock-M2 (daily avg.) (\$ bil.) 1/	3,345.5	3,445.8	3,496.9	3,482.1	3,472.9	3,474.6	3,505.4	3,511.6
Three-month Treasury bill rate (%)	7.51	5.42	3.45	3.70	2.97	2.89	2.96	3.10
AAA corporate bond yield (Moody's) (%)	9.32	8.77	8.14	8.22	7.58	7.46	7.43	7.33
Housing starts (1,000) 2/	1,193	1,014	1,200	1,141	1,124	1,206	1,254	1,254
Auto sales at retail, total (mil.)	9.5	8.4	8.4	6.9	8.3	8.9	9.1	9.1
Business inventory/sales ratio	1.53	1.54	1.50	1.50	1.47	1.47	1.47	—
Sales of all retail stores (\$bil.) 3/	1,849.8	1,865.5	1,962.4	161.1	167.4	170.5	171.2	171.9
Nondurable goods stores (\$bil.)	1,178.6	1,211.6	1,257.3	103.4	106.7	107.7	107.5	107.8
Food stores (\$ bil.)	369.8	376.9	384.0	31.8	32.2	32.5	32.4	32.4
Eating & drinking places (\$ bil.)	191.0	196.9	201.9	16.0	17.3	17.5	17.4	17.5
Apparel & accessory stores (\$ bil.)	95.6	97.5	105.0	8.7	8.4	8.8	8.9	8.9

1/ Annual data as of December of the year listed. 2/ Private, including farm. 3/ Annual total. P = preliminary. — = not available.

Note: \* Population estimates based on 1990 census.

Information contact: Ann Duncan (202) 219-0313.

Table 3.—Foreign Economic Growth, Inflation, &amp; Exports

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992 E	1993 F	1994 F	Average 1983-92
Annual percent change													
World, less U.S.													
Real GDP	2.4	3.6	3.4	3.0	3.5	4.4	3.5	3.0	1.1	1.1	1.0	2.5	2.9
GDP deflator	8.8	8.2	8.8	7.8	9.0	10.6	10.8	23.8	16.2	49.4	38.6	28.0	15.3
Real exports	2.7	9.7	3.8	2.1	5.0	7.0	7.8	6.1	3.6	2.8	3.3	4.3	5.1
Developed, less U.S.													
Real GDP	2.1	3.2	3.4	2.7	3.2	4.5	3.6	3.5	1.4	1.0	0.2	1.8	2.9
GDP deflator	6.6	5.2	4.6	4.3	2.9	3.3	4.1	3.2	3.4	4.5	2.8	2.7	4.2
Real exports	3.5	10.8	5.2	-0.2	2.0	6.2	7.9	6.9	4.7	3.0	2.4	3.7	5.1
Eastern Europe & F.S.U.													
Real GDP	3.6	4.0	2.3	3.6	2.0	3.8	1.5	-3.1	-13.3	-13.8	-7.4	-3.3	-0.9
GDP deflator 1/	4.2	5.0	6.4	8.1	12.8	35.3	41.3	192.3	68.9	204.4	89.7	50.8	57.9
Real exports	4.8	6.2	-4.0	9.1	7.6	8.5	-5.3	-6.9	-22.0	-13.3	-3.4	0.6	-1.6
Developing													
Real GDP	3.1	4.7	4.0	3.9	4.5	4.4	3.6	3.2	3.7	4.5	4.9	5.0	4.0
GDP deflator	38.7	37.3	36.4	25.5	33.1	28.4	19.2	18.9	14.8	15.1	14.6	14.0	26.3
Real exports	0.4	7.2	1.7	7.5	11.1	9.4	9.0	5.6	5.7	4.9	6.6	6.4	6.2
Asia													
Real GDP	8.2	7.9	5.9	7.2	8.6	9.1	5.5	5.7	5.0	6.7	6.4	6.3	7.0
GDP deflator	8.3	7.5	5.9	4.4	7.8	8.2	5.1	8.4	8.5	8.6	8.2	5.2	7.2
Real exports	6.4	11.3	2.9	19.0	15.8	14.9	8.2	7.4	9.5	8.3	8.9	8.5	10.4
Latin America													
Real GDP	-2.7	3.7	3.6	4.4	3.0	0.0	1.3	-1.3	2.6	2.1	3.0	3.7	1.7
GDP deflator 1/	30.3	40.6	89.0	62.8	125.5	66.5	35.9	29.6	22.7	23.6	21.1	19.8	50.7
Real exports	2.0	12.0	2.0	0.0	8.0	6.8	10.4	3.2	3.3	3.1	8.4	7.3	5.1
Africa													
Real GDP	1.1	2.2	2.3	1.4	0.6	2.9	2.8	0.9	2.2	1.1	2.7	3.3	1.7
GDP deflator	17.0	13.1	12.2	8.5	25.7	17.4	19.6	15.0	18.2	13.8	18.7	19.3	16.1
Real exports	-5.3	-1.5	3.5	-1.0	0.0	2.9	5.0	8.4	2.1	0.1	4.8	2.9	1.4
Middle East													
Real GDP	4.5	1.2	1.7	-3.6	-0.1	-0.2	2.5	5.8	2.0	4.9	4.8	4.2	2.0
GDP deflator	-4.5	1.2	3.1	5.7	14.6	9.5	13.5	20.4	2.7	9.8	12.8	11.6	7.8
Real exports	-19.6	-6.7	-7.1	-3.8	24.6	4.8	21.0	6.0	2.9	13.8	4.9	15.8	3.6

1/ Excludes Yugoslavia, Argentina, Brazil, &amp; Peru starting in 1989. E = estimate. F = forecast.

Information contact: Alberto Jerardo, (202) 219-0705.

## Farm Prices

Table 4.—Indexes of Prices Received &amp; Paid by Farmers, U.S. Average

	Annual			1992				1993				1977 = 100
	1990	1991	1992	July	Feb	Mar	Apr	May	June R	July P		
<b>Prices received</b>												
All farm products	149	145	140	138	140	142	148	144	140	140	140	140
All crops	127	129	121	117	118	118	128	120	112	118		
Food grains	123	115	139	129	134	132	130	124	113	111		
Feed grains & hay	123	117	116	117	108	110	113	113	110	113		
Feed grains	118	115	114	116	101	105	107	106	104	109		
Cotton	107	108	88	93	88	92	90	88	88	87		
Tobacco	152	181	154	140	167	167	141	141	141	141		
Oil-bearing crops	94	91	86	85	89	90	91	92	93	105		
Fruit, all	188	262	181	146	138	118	133	142	146	142		
Fresh market 1/	198	285	185	145	130	109	127	137	148	143		
Commercial vegetables	142	135	155	139	177	154	241	182	123	144		
Fresh market	144	140	157	138	185	183	278	197	118	149		
Potatoes & dry beans	189	141	124	162	133	158	175	177	154	177		
Livestock & products	170	161	157	157	162	166	187	188	166	162		
Meat animals	193	188	176	177	187	192	191	192	188	183		
Dairy products	141	126	135	138	127	128	130	134	135	134		
Poultry & eggs	131	124	117	114	121	130	131	130	128	124		
<b>Prices paid</b>												
Commodities & services												
Interest, taxes, & wage rates	184	189	191	192	194	194	187	197	197	197		
Production items	171	174	174	175	176	176	179	179	179	178		
Feed	128	123	123	123	—	—	124	—	—	124		
Feeder livestock	213	214	202	204	—	—	222	—	—	218		
Seed	165	163	162	162	—	—	169	—	—	169		
Fertilizer	131	134	131	132	—	—	129	—	—	129		
Agricultural chemicals	139	151	159	161	—	—	166	—	—	166		
Fuels & energy	204	203	199	208	—	—	199	—	—	198		
Farm & motor supplies	154	157	160	160	—	—	159	—	—	159		
Autos & trucks	231	244	258	262	—	—	272	—	—	275		
Tractors & self-propelled machinery	202	211	219	217	—	—	223	—	—	223		
Other machinery	218	226	233	234	—	—	245	—	—	245		
Building & fencing	144	146	150	150	—	—	162	—	—	156		
Farm services & cash rent	188	171	172	172	—	—	172	—	—	172		
Int. payable per acre on farm real estate debt	177	169	187	167	—	—	164	—	—	164		
Taxes payable per acre on farm real estate	158	164	171	171	—	—	178	—	—	178		
Wage rates (seasonally adjusted)	191	200	209	212	—	—	223	—	—	223		
Production items, interest, taxes, & wage rates	172	175	176	177	—	—	181	—	—	180		
Ratio, Prices received to prices paid (%) 2/	81	77	73	72	73	73	74	73	71	71		
Prices received (1910-14=100)	681	665	637	629	640	647	669	660	639	641		
Prices paid, etc. (parity index) (1910-14=100)	1,267	1,298	1,317	1,324	—	—	1,357	—	—	1,356		
Parity ratio (1910-14=100) (%) 2/	54	51	49	48	—	—	49	—	—	47		

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities & services, interest, taxes, & wage rates. Ratio uses the most recent prices paid index. Prices paid data are quarterly & will be published in January, April, July, & October. R = revised. P = preliminary. — = not available.

Information contact: Ann Duncan (202) 219-0313.

Table 5.—Prices Received by Farmers, U.S. Average

CROPS	Annual 1/			1992		1993					
	1990	1991	1992	July	Feb	Mar	Apr	May	June R	July P	
All wheat (\$/bu.)	2.81	3.00	3.24	3.15	3.33	3.30	3.25	3.10	2.82	2.75	
Rice, rough (\$/cwt)	6.70	7.58	5.95	6.99	6.08	5.64	5.52	5.24	5.02	5.03	
Corn (\$/bu.)	2.28	2.37	2.05	2.33	2.00	2.10	2.16	2.13	2.09	2.17	
Sorghum (\$/cwt)	3.79	4.01	3.30	3.62	3.32	3.38	3.38	3.34	3.41	3.82	
All hay, baled (\$/ton)	80.60	71.20	73.20	69.90	77.70	78.90	83.80	88.30	80.50	77.20	
Soybeans (\$/bu.)	5.74	5.58	5.50	5.59	5.56	5.65	5.73	5.81	5.80	6.82	
Cotton, upland (cts./lb.)	67.1	58.8	—	56.3	52.0	55.5	54.3	53.2	53.0	52.6	
Potatoes (\$/cwt)	6.08	4.96	5.28	8.91	5.25	6.41	7.47	7.63	6.57	7.84	
Lettuce (\$/cwt) 2/	11.50	11.40	12.40	13.00	19.00	14.70	37.50	12.50	11.50	21.60	
Tomatoes, fresh (\$/cwt) 2/	27.30	31.80	36.20	28.30	21.80	21.20	45.20	58.50	21.90	21.80	
Onions (\$/cwt)	10.50	12.50	12.80	12.20	14.10	17.00	31.70	24.10	10.30	10.80	
Dry edible beans (\$/cwt)	18.50	15.60	20.70	18.90	20.80	20.10	18.10	17.70	18.50	17.70	
Apples for fresh use (cts./lb.)	20.9	25.1	19.2	28.6	17.8	15.2	14.7	15.3	18.1	18.0	
Pears for fresh use (\$/ton)	360.00	385.00	378.00	300.00	393.00	399.00	429.00	478.00	538.00	401.00	
Oranges, all uses (\$/box) 3/	6.13	6.78	5.78	1.69	2.39	2.11	3.23	3.65	3.89	4.10	
Grapefruit, all uses (\$/box) 3/	5.86	5.55	8.25	4.20	2.42	1.48	2.13	1.62	0.98	0.14	
LIVESTOCK											
Beef cattle (\$/cwt)	74.80	72.80	71.38	70.60	75.80	77.30	77.40	78.90	74.70	72.90	
Calves (\$/cwt)	98.50	99.90	89.65	90.10	95.90	98.20	99.80	100.00	99.00	97.80	
Hogs (\$/cwt)	54.00	48.80	41.88	44.60	44.20	48.80	45.50	47.00	48.20	46.00	
Lambs (\$/cwt)	58.00	52.50	60.76	62.20	72.70	78.30	68.50	61.80	56.80	55.50	
All milk, sold to plants (\$/cwt)	13.74	12.27	13.15	13.40	12.30	12.20	12.80	13.00	13.10	13.00	
Milk, manuf. grade (\$/cwt)	12.34	11.05	11.91	12.30	10.90	11.10	12.00	12.40	11.90	11.70	
Broilers (cts./lb.)	32.4	31.0	30.8	34.1	31.8	32.4	33.2	35.7	34.4	35.0	
Eggs (cts./doz.) 4/	70.4	66.2	57.7	52.0	61.5	70.7	69.3	62.9	65.4	57.8	
Turkeys (cts./lb.)	38.4	37.7	38.0	37.9	34.8	37.2	37.7	38.4	37.3	38.8	
Wool (cts./lb.) 5/	80.0	55.0	74.0	72.0	43.7	45.5	45.5	55.0	55.1	48.6	

1/ Season average price by crop year for crops. Calendar year average of monthly prices for livestock. 2/ Excludes Hawaii. 3/ Equivalent on-tree returns.

4/ Average of all eggs sold by producers including hatching eggs &amp; eggs sold at retail. 5/ Average local market price, excluding incentive payments.

P = preliminary. R = revised. — = not available.

Information contact: Ann Duncan (202) 219-0313.

## Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual			1992			1993					
	1992	July	Dec	Jan	Feb	Mar	Apr	May	June	July		
1982-84=100												
Consumer Price Index, all items	140.3	140.5	141.9	142.8	143.1	143.8	144.0	144.2	144.4	144.4		
Consumer Price Index, less food	140.8	141.1	142.5	143.1	143.7	144.2	144.6	144.8	145.1	145.2		
All food	137.9	137.2	138.7	139.8	139.9	140.1	140.6	141.1	140.4	140.3		
Food away from home	140.7	140.8	141.8	142.0	142.2	142.4	142.7	142.9	143.2	143.4		
Food at home	136.8	135.7	137.5	139.1	139.1	139.4	140.0	140.7	139.3	139.1		
Meats 1/	130.7	130.0	131.1	132.3	132.1	133.1	133.8	134.7	134.9	135.5		
Beef & veal	132.3	130.7	132.8	135.1	135.6	136.3	137.6	138.2	137.6	137.4		
Pork	127.8	129.1	127.4	127.9	127.2	129.0	128.5	130.5	132.1	134.2		
Poultry	131.4	132.1	133.7	134.6	133.1	135.7	135.2	136.8	136.5	138.0		
Fish	151.7	150.4	152.0	157.2	157.5	157.8	159.7	154.7	154.8	153.2		
Eggs	108.3	104.7	117.7	116.2	115.8	120.3	126.9	114.9	118.4	115.1		
Dairy products 2/	128.5	128.3	129.1	129.5	128.8	128.8	128.0	128.0	129.8	130.2		
Fats & oils 3/	129.8	129.9	128.4	130.2	130.7	130.2	130.2	129.4	130.1	130.4		
Fresh fruit	184.2	173.3	181.8	191.0	187.0	184.4	184.6	188.0	176.1	178.7		
Processed fruit	137.7	138.4	134.8	133.3	134.5	132.0	132.1	130.7	129.7	131.0		
Fresh vegetables	157.9	148.1	168.1	172.4	171.1	173.7	179.3	189.6	167.1	155.8		
Potatoes	141.5	155.9	137.2	139.7	138.9	142.4	152.0	156.0	163.4	185.2		
Processed vegetables	128.8	129.2	127.3	129.8	128.9	130.2	130.4	129.9	130.9	131.2		
Cereals & bakery products	151.5	152.4	153.3	153.4	154.9	154.6	155.4	156.3	156.7	157.2		
Sugar & sweets	133.1	133.8	132.1	133.1	133.3	132.8	133.2	133.4	133.1	133.2		
Beverages, nonalcoholic	114.3	113.9	112.3	113.5	115.1	114.8	114.2	115.0	114.6	114.4		
Apparel												
Apparel, commodities less footwear	130.2	126.8	129.4	127.3	131.9	135.2	135.9	133.4	129.7	126.9		
Footwear	125.0	124.4	125.1	124.4	125.2	126.3	127.1	127.8	125.6	123.9		
Tobacco & smoking products	219.8	220.5	228.9	234.6	235.8	236.3	237.3	237.9	236.2	235.8		
Beverages, alcoholic	147.3	147.7	148.1	148.7	149.1	149.4	149.7	149.5	149.6	149.6		

1/ Beef, veal, lamb, pork, &amp; processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 219-0313.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			June	1993					
	1990	1991	1992		Jan	Feb R	Mar	Apr	May	June
	1982 = 100									
All commodities	116.3	116.5	117.2	118.0	118.0	118.4	118.7	119.2	119.7	119.6
Finished goods 1/	119.2	121.7	123.2	123.9	124.2	124.5	124.8	125.3	125.7	125.8
All foods 2/	123.2	122.2	120.8	120.8	121.9	122.2	122.4	124.2	124.8	123.2
Consumer foods	124.4	124.1	123.2	123.1	124.3	124.5	124.8	126.3	126.7	125.4
Fresh fruit & melons	118.1	129.9	83.8	80.2	80.0	78.7	73.5	73.3	89.9	82.3
Fresh & dried vegetables	118.1	103.8	115.0	86.0	132.1	136.9	132.3	174.0	163.7	104.5
Dried fruit	106.7	111.8	114.4	114.9	116.3	115.7	115.7	115.8	115.9	115.5
Canned fruit & juice	127.0	128.6	134.5	136.4	128.0	127.5	125.8	124.5	124.3	124.4
Frozen fruit & juice	139.0	116.3	125.8	125.8	108.8	105.8	105.3	104.8	105.8	112.4
Fresh veg. excl. potatoes	107.8	100.2	116.4	81.3	128.8	125.8	117.2	178.5	163.5	80.8
Canned veg. & juices	116.7	112.9	109.6	109.4	110.1	109.8	109.3	108.7	108.8	109.5
Frozen vegetables	118.4	117.6	118.4	115.5	118.0	118.0	118.1	118.6	119.9	120.8
Potatoes	157.3	125.7	118.3	108.6	120.2	119.1	131.3	144.0	142.3	147.5
Eggs for fresh use (1991=100)	3/	3/	78.8	71.0	87.1	87.9	99.0	91.9	82.9	87.8
Bakery products	141.0	146.8	152.5	153.1	155.0	155.7	155.4	156.0	155.9	156.4
Meats	117.0	113.5	106.7	107.8	108.9	109.7	110.8	113.0	113.9	113.4
Beef & veal	118.0	112.2	109.7	108.8	114.3	114.9	115.8	117.3	119.2	116.4
Pork	119.8	113.4	98.5	102.9	98.6	99.9	101.0	106.4	106.3	109.2
Processed poultry	113.8	109.9	109.1	109.8	108.5	108.4	109.4	110.0	111.4	111.4
Fish	147.2	149.5	153.0	159.8	163.5	167.2	168.6	160.6	159.0	156.2
Dairy products	117.2	114.8	118.0	118.7	116.4	115.4	114.9	116.9	118.4	119.8
Processed fruits & vegetables	124.7	119.5	120.8	121.0	117.5	117.0	116.4	115.9	116.3	117.5
Shortening & cooking oil	123.2	116.5	114.9	118.7	119.4	116.7	117.9	120.6	119.8	119.2
Soft drinks	122.3	125.5	125.7	127.6	128.9	127.9	127.5	127.4	126.3	126.6
Consumer finished goods less foods	115.3	118.7	120.8	122.1	121.4	121.8	122.1	122.6	123.2	123.5
Beverages, alcoholic	117.2	123.7	126.1	126.4	125.8	126.3	126.3	128.0	126.4	125.6
Apparel	117.5	119.6	122.2	121.8	123.2	123.1	123.3	123.2	123.2	122.9
Footwear	125.6	128.6	131.9	131.9	133.5	133.8	134.1	134.1	134.2	134.1
Tobacco products	221.4	249.7	275.3	283.2	291.8	292.2	292.2	296.0	296.7	290.2
Intermediate materials 4/	114.5	114.4	114.7	115.4	115.2	115.6	115.9	116.2	116.2	116.7
Materials for food manufacturing	117.9	115.3	113.9	115.5	113.3	112.8	113.2	114.6	115.7	115.1
Flour	103.6	96.8	109.3	113.1	109.6	110.0	109.2	110.4	107.4	106.2
Refined sugar 5/	122.7	121.6	120.0	120.0	118.0	117.6	118.3	118.7	118.5	117.4
Crude vegetable oils	115.8	103.0	97.1	107.0	104.1	101.3	102.8	104.1	104.1	100.0
Crude materials 6/	108.9	101.2	100.3	102.1	101.4	101.4	102.6	103.6	106.3	104.6
Foodstuffs & feedstuffs	113.1	105.5	105.1	107.4	105.8	106.0	108.2	110.1	112.1	107.3
Fruits & vegetables & nuts 7/	117.5	114.7	96.8	83.3	103.7	105.2	101.3	118.0	120.3	93.5
Grains	97.4	92.0	97.3	105.7	89.8	88.1	89.3	93.7	91.1	85.3
Livestock	115.6	107.9	104.7	105.3	108.3	110.0	112.6	113.0	112.8	109.8
Poultry, live	118.8	111.2	112.6	110.7	112.0	110.4	116.1	116.5	132.3	118.9
Fibers, plant & animal	117.8	115.1	89.8	98.2	89.5	89.5	94.2	91.5	93.3	90.5
Fluid milk	100.8	89.5	96.3	98.0	91.0	89.1	88.7	90.8	95.0	97.5
Oilseeds	112.1	106.4	107.5	117.4	108.9	106.7	108.3	112.2	114.2	109.6
Tobacco, leaf	95.8	101.1	101.0	94.4	104.8	110.0	108.7	97.6	91.8	91.8
Sugar, raw cane	119.2	113.7	112.1	110.6	109.6	109.7	112.1	113.9	111.1	112.4

1/ Commodities ready for sale to ultimate consumer. 2/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). 3/ New index beginning Dec. 1991. 4/ Commodities requiring further processing to become finished goods. 5/ All types & sizes of refined sugar. 6/ Products entering market for the first time that have not been manufactured at that point. 7/ Fresh & dried. R = revised.

Information contact: Ann Duncan (202) 219-0313.

## Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual			1992		1993				
	1990	1991	1992	June	Jan	Feb	Mar	Apr	May	June
Market basket 1/										
Retail cost (1982-84=100)	133.5	137.4	138.4	137.6	141.0	140.6	141.0	141.7	142.6	141.1
Farm value (1982-84=100)	113.1	106.1	103.4	102.5	104.1	103.9	106.3	108.7	109.1	105.5
Farm-retail spread (1982-84=100)	144.5	154.2	157.3	156.4	160.8	160.4	159.7	159.3	160.6	160.2
Farm value-retail cost (%)	29.7	27.0	28.2	28.1	25.9	25.9	28.4	26.9	26.8	28.2
Meat products										
Retail cost (1982-84=100)	128.5	132.5	130.7	131.0	132.3	132.1	133.1	133.8	134.7	134.9
Farm value (1982-84=100)	116.8	110.0	104.5	107.8	107.1	109.5	113.7	115.7	113.6	112.8
Farm-retail spread (1982-84=100)	140.4	155.8	157.5	154.8	158.2	155.3	153.0	152.4	156.4	157.8
Farm value-retail cost (%)	46.0	42.0	40.5	41.7	41.0	42.0	43.3	43.8	42.7	42.3
Dairy products										
Retail cost (1982-84=100)	128.5	125.1	128.5	127.8	129.5	128.8	128.8	128.0	128.0	129.8
Farm value (1982-84=100)	101.7	90.0	95.9	96.1	92.6	90.0	89.4	89.1	92.4	95.5
Farm-retail spread (1982-84=100)	149.5	157.5	158.8	157.0	163.5	164.6	165.1	163.9	160.8	161.4
Farm value-retail cost (%)	38.5	34.5	35.8	36.1	34.3	33.5	33.3	33.4	34.6	35.3
Poultry										
Retail cost (1982-84=100)	132.5	131.5	131.4	130.7	134.6	133.1	135.7	135.2	136.6	136.5
Farm value (1982-84=100)	107.6	102.5	104.0	103.7	102.7	103.0	105.8	108.2	115.4	111.3
Farm-retail spread (1982-84=100)	161.1	164.9	163.0	161.7	171.3	167.7	170.1	166.3	181.1	165.5
Farm value-retail cost (%)	43.5	41.7	42.4	42.5	40.9	41.4	41.7	42.8	45.2	43.6
Eggs										
Retail cost (1982-84=100)	124.1	121.2	108.3	100.7	118.2	115.8	120.3	128.9	114.9	116.4
Farm value (1982-84=100)	108.0	100.9	77.8	69.9	92.6	88.3	105.9	98.1	83.5	88.5
Farm-retail spread (1982-84=100)	153.2	157.6	163.2	158.0	158.6	164.6	146.2	178.6	171.3	166.5
Farm value-retail cost (%)	55.9	53.5	46.1	44.8	51.2	49.1	56.5	49.7	48.7	48.9
Cereal & bakery products										
Retail cost (1982-84=100)	140.0	145.8	151.5	151.8	153.4	154.9	154.8	155.4	156.3	158.7
Farm value (1982-84=100)	90.6	85.3	94.7	96.5	91.6	91.2	90.9	91.2	88.0	83.9
Farm-retail spread (1982-84=100)	146.9	154.3	159.4	159.3	162.0	163.8	163.5	164.4	165.8	166.9
Farm value-retail cost (%)	7.9	7.2	7.7	7.8	7.3	7.2	7.2	7.2	8.9	8.6
Fresh fruits										
Retail cost (1982-84=100)	174.6	200.1	189.6	188.0	199.0	191.6	188.5	188.5	193.1	180.8
Farm value (1982-84=100)	128.3	174.4	122.5	120.5	132.6	132.2	132.2	132.5	132.8	134.2
Farm-retail spread (1982-84=100)	195.9	211.9	220.6	219.2	229.8	219.0	214.5	214.4	220.9	202.3
Farm value-retail cost (%)	23.2	27.5	20.4	20.2	21.0	21.8	22.2	22.2	21.7	23.4
Fresh vegetables										
Retail cost (1982-84=100)	151.1	154.4	157.9	148.9	172.4	171.1	173.7	179.3	189.6	167.1
Farm value (1982-84=100)	124.4	110.8	120.5	87.9	132.6	129.7	129.4	183.6	173.3	108.8
Farm-retail spread (1982-84=100)	184.9	176.8	177.2	177.3	192.9	192.4	196.5	187.4	198.0	197.2
Farm value-retail cost (%)	28.0	24.4	25.8	20.3	26.1	25.7	25.3	31.0	31.0	22.1
Processed fruits & vegetables										
Retail cost (1982-84=100)	132.7	130.2	133.7	134.1	131.6	131.9	131.1	131.2	130.2	130.0
Farm value (1982-84=100)	144.0	120.6	129.0	130.7	108.3	105.8	104.9	102.7	102.2	102.0
Farm-retail spread (1982-84=100)	129.1	133.2	135.2	135.2	138.9	140.0	139.3	140.1	138.9	138.7
Fats & oils										
Retail cost (1982-84=100)	126.3	131.7	129.8	130.2	130.2	130.7	130.2	130.2	129.4	130.1
Farm value (1982-84=100)	107.1	98.0	93.2	99.4	102.0	99.7	98.4	101.0	101.1	101.6
Farm-retail spread (1982-84=100)	133.4	144.2	143.3	141.5	140.8	142.1	141.9	141.0	139.8	140.6
Farm value-retail cost (%)	22.8	20.0	19.3	20.5	21.1	20.5	20.3	20.9	21.0	21.0
	Annual			1992		1993				
	1990	1991	1992	July	Feb	Mar	Apr	May	June	July
Beef, Choice										
Retail price 2/ (cts./lb.)	281.0	288.3	284.6	283.8	292.5	295.5	299.1	304.2	297.9	296.7
Wholesale value 3/ (cts.)	189.6	182.5	179.6	173.6	187.8	191.7	193.5	195.3	185.2	175.9
Net farm value 4/ (cts.)	168.4	160.2	161.8	158.9	172.7	178.7	177.2	175.5	165.8	157.6
Farm-retail spread (cts.)	112.6	128.1	122.8	126.9	119.8	116.8	121.9	128.7	132.1	139.1
Wholesale-retail 5/ (cts.)	91.4	105.8	105.0	110.2	104.7	103.8	105.6	108.9	112.7	120.8
Farm-wholesale 6/ (cts.)	212	22.3	17.8	18.7	15.1	13.0	16.3	18.8	19.4	18.3
Farm value-retail price (%)	60	56	57	55	59	60	59	58	56	53
Pork										
Retail price 2/ (cts./lb.)	212.6	211.9	198.0	200.8	193.9	193.9	191.4	194.8	196.5	200.2
Wholesale value 3/ (cts.)	118.3	108.9	98.9	101.8	99.0	102.6	102.3	102.6	105.7	102.8
Net farm value 4/ (cts.)	87.2	78.4	87.8	72.2	70.8	74.6	71.9	74.9	77.0	73.8
Farm-retail spread (cts.)	125.4	133.5	130.2	128.4	123.1	119.3	119.5	119.9	119.5	126.6
Wholesale-retail 5/ (cts.)	94.3	103.0	99.1	98.8	94.9	91.3	89.1	92.2	90.8	97.4
Farm-wholesale 6/ (cts.)	31.1	30.5	31.1	29.6	28.2	28.0	30.4	27.7	28.7	29.2
Farm value-retail price (%)	41	37	34	36	37	38	38	38	39	37

1/ Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by BLS. The farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing. 2/ Weighted average price of retail cuts from pork & choice yield grade 3 beef. Prices from BLS. 3/ Value of wholesale (boxed beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts adjusted for transportation costs & byproduct values. 4/ Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of byproducts. 5/ Charges for retailing & other marketing services such as wholesaling, & in-city transportation. 6/ Charges for livestock marketing, processing, & transportation.

Information contacts: Denis Dunham (202) 219-0870, Larry Duewer (202) 219-0712.

**Table 9.—Price Indexes of Food Marketing Costs**  
**(See the June 1993 issue.)**  
**Information contact: Denis Dunham (202) 219-0870.**

## Livestock & Products

**Table 10.—U.S. Meat Supply & Use**

	Beg. stocks	Production 1/	Imports	Total supply	Exports	Ending stocks	Consumption		Primary market price 3/
							Total	Per capita 2/	
Million pounds 4/									
Beef									
1990	335	22,743	2,356	25,434	1,006	397	24,031	67.8	79.55
1991	397	22,917	2,408	25,720	1,188	419	24,113	66.8	74.28
1992	419	23,086	2,440	25,945	1,324	360	24,281	66.5	75.36
1993 F	360	23,166	2,395	25,921	1,300	350	24,271	65.8	75-78
Pork									
1990	313	15,354	898	16,565	238	296	16,031	49.8	55.32
1991	298	15,999	775	17,070	283	388	16,399	50.4	49.69
1992	388	17,234	645	18,287	407	385	17,475	53.1	43.03
1993 F	385	17,307	680	18,372	405	385	17,582	52.9	44-47
Veal 5/									
1990	4	327	0	331	0	6	325	1.1	96.51
1991	6	306	0	312	0	7	305	1.0	99.84
1992	7	310	0	317	0	5	312	1.0	89.38
1993 F	5	286	0	291	0	5	286	0.9	94-97
Lamb & mutton									
1990	8	363	41	412	6	8	397	1.4	55.54
1991	8	363	41	412	10	6	396	1.4	53.21
1992	5	348	50	404	8	8	388	1.4	61.00
1993 F	8	343	50	401	8	8	385	1.3	63-66
Total red meat									
1990	660	38,797	3,295	42,742	1,250	707	40,784	120.0	—
1991	707	39,585	3,223	43,515	1,481	820	41,214	119.8	—
1992	820	40,978	3,135	44,833	1,739	758	42,436	122.0	—
1993 F	758	41,102	3,125	44,985	1,713	748	42,524	120.9	—
Broilers									
1990	38	18,430	0	18,468	1,143	26	17,299	61.0	54.8
1991	26	19,591	0	19,617	1,261	36	18,320	63.7	52.0
1992	36	20,907	0	20,943	1,489	33	19,421	66.8	52.6
1993 F	33	22,024	0	22,057	1,740	33	20,284	69.1	52-55
Mature chicken									
1990	189	523	0	713	25	224	484	1.9	—
1991	224	508	0	732	28	274	429	1.7	—
1992	274	519	0	793	41	345	407	1.6	—
1993 F	345	511	0	856	60	350	446	1.7	—
Turkeys									
1990	236	4,514	0	4,750	54	308	4,390	17.6	63.2
1991	306	4,603	0	4,909	103	264	4,541	18.0	61.3
1992	264	4,778	0	5,042	171	272	4,599	18.0	59.9
1993 F	272	4,844	0	5,116	187	260	4,669	18.1	59-62
Total poultry									
1990	463	23,488	0	23,931	1,222	557	22,152	80.5	—
1991	557	24,701	0	25,258	1,392	575	23,291	83.4	—
1992	575	26,203	0	26,778	1,701	650	24,428	86.4	—
1993 F	650	27,370	0	28,029	1,987	643	25,399	88.0	—
Red meat & poultry									
1990	1,123	62,255	3,295	66,673	2,473	1,264	62,937	200.5	—
1991	1,284	64,286	3,223	68,772	2,873	1,395	64,504	202.0	—
1992	1,395	67,181	3,135	71,711	3,440	1,408	66,864	208.4	—
1993 F	1,408	68,481	3,125	73,014	3,700	1,391	67,923	209.8	—

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry. 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was 70.5). 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Medium # 1, Nebraska Direct 1,100-1,300 lb.; pork: barrows & gilts, Iowa; Southern Minnesota; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. F = forecast. — = not available.

Table 11.—U.S. Egg Supply &amp; Use

	Beg. stocks	Pro- duc- tion	Im- ports	Total supply	Ex- ports	Hatch- ing use	Ending stocks	Consumption		
								Total	Per capita	Wholesale price*
								No.	Cts./doz.	
Million dozen										
1987	10.4	5,888.2	5.6	5,884.2	111.2	599.1	14.4	5,159.5	254.9	61.8
1988	14.4	5,784.2	5.3	5,803.9	141.8	505.9	15.2	5,041.0	248.9	62.1
1989	15.2	5,598.2	25.2	5,638.5	91.6	843.9	10.7	4,892.4	237.3	81.9
1990	10.7	5,665.6	9.1	5,685.3	100.5	678.5	11.8	4,894.7	235.0	82.2
1991	11.6	5,779.3	2.3	5,793.3	154.3	708.1	13.0	4,917.9	233.5	77.5
1992	13.0	5,882.7	4.3	5,899.9	157.0	728.4	13.5	5,001.0	235.0	85.4
1993 F	13.5	5,933.8	5.0	5,952.3	154.0	757.7	12.0	5,028.6	233.8	73-78

\* Cartoned grade A large eggs, New York. F = forecast.

Information contact: Maxine Davis (202) 219-0767.

Table 12.—U.S. Milk Supply & Use<sup>1/</sup>

Production	Farm use	Commercial			Total commer- cial supply	CCC net re- movals	Commercial		All milk price 1/	CCC net removals	
		Farm market- ings	Beg. stock	Im- ports			Ending stocks	Disap- pear- ance		Skim solids basis	Total solids basis <sup>2/</sup>
		Billion pounds (milkfat basis)								\$/cwt	Billion pounds
1985	143.0	2.5	140.6	4.8	148.2	13.3	4.5	130.4	12.78	17.2	15.8
1988	143.1	2.4	140.7	4.5	147.9	10.8	4.1	133.0	12.51	14.3	12.0
1987	142.7	2.3	140.5	4.1	147.1	8.8	4.8	135.7	12.64	9.3	8.3
1988	145.2	2.2	142.9	4.6	149.9	9.1	4.3	138.5	12.26	5.5	6.9
1989	144.2	2.1	142.2	4.3	149.0	9.4	4.1	135.4	13.56	0.4	4.0
1990	148.3	2.0	148.3	4.1	153.1	9.0	5.1	138.9	13.88	1.6	4.8
1991	148.6	2.0	148.5	5.1	154.3	10.4	4.5	139.4	12.24	3.8	6.5
1992	151.7	2.0	149.7	4.5	158.7	10.0	4.7	142.0	13.09	2.4	5.4
1993 F	151.5	2.0	149.5	4.7	156.8	7.9	4.5	144.4	12.75	5.0	6.2

1/ Delivered to plants &amp; dealers; does not reflect deductions. 2/ Arbitrarily weighted average of milkfat basis (40 percent) &amp; skim solids basis (60 percent). F = forecast.

Information contact: Jim Miller (202) 219-0770.

Table 13.—Poultry &amp; Eggs

		Annual			1992			1993			
		1990	1991	1992	June	Jan	Feb	Mar	Apr	May	June
<b>Broilers</b>											
Federally inspected slaughter, certified (mil. lb.)		18,555.0	19,727.7	21,052.4	1,824.7	1,802.8	1,659.8	1,897.1	1,887.2	1,784.2	1,977.0
Wholesale price, 12-city (cts./lb.)		54.8	52.0	52.8	52.4	52.1	53.0	54.0	64.7	57.7	55.0
Price of grower feed (\$/ton)		218	208	208	213	203	205	209	208	210	208
Broiler-feed price ratio 1/		3.0	3.0	3.1	3.0	3.1	3.1	3.1	3.2	3.4	3.3
Stocks beginning of period (mil. lb.)		38.3	28.1	38.1	31.8	32.8	31.6	32.7	28.0	32.6	38.3
Broiler-type chicks hatched (mil.) 2/		6,324.4	6,616.5	6,830.9	584.5	587.0	536.4	611.9	590.4	624.3	610.7
<b>Turkeys</b>											
Federally inspected slaughter, certified (mil. lb.)		4,560.7	4,651.9	4,828.9	435.0	354.1	322.3	383.3	391.0	378.7	445.8
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.)		63.2	61.2	60.2	59.5	58.1	56.8	68.4	59.0	68.8	58.4
Price of turkey grower feed (\$/ton)		238	230	242	243	239	240	240	251	248	249
Turkey-feed price ratio 1/		3.2	3.3	3.1	3.1	3.0	2.9	3.1	3.0	3.1	3.0
Stocks beginning of period (mil. lb.)		235.9	306.4	284.1	486.8	271.7	314.7	359.8	350.2	424.4	474.0
Poults placed in U.S. (mil.)		304.9	308.1	307.8	28.0	24.7	25.3	27.3	27.0	27.1	27.6
<b>Eggs</b>											
Farm production (mil.)		67,987	89,352	70,592	6,693	6,020	5,421	8,054	6,850	5,998	5,803
Average number of layers (mil.)		270	275	278	275	282	282	281	281	280	280
Rate of lay (eggs per layer on farms)		251.7	262.4	263.9	20.7	21.3	19.2	21.5	20.8	21.4	20.7
Cartoned price, New York, grade A large (cts./doz.) 3/		82.2	77.5	65.4	62.0	71.7	69.9	85.2	77.8	67.6	74.7
Price of laying feed (\$/ton)		200	192	199	200	199	198	199	201	200	201
Egg-feed price ratio 1/		7.0	6.8	6.7	6.3	6.4	6.2	7.1	6.0	6.3	6.5
Stocks, first of month											
Shell (mil. doz.)		0.36	0.45	0.63	1.02	0.45	0.38	0.36	0.45	0.18	0.18
Frozen (mil. doz.)		10.3	11.2	12.3	14.4	13.0	12.7	12.0	11.4	10.9	11.8
Replacement chicks hatched (mil.)		398	420	386	34.6	33.4	33.7	37.3	37.2	37.1	35.1

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks is currently reported for 15 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 219-0767.

Table 14.—Dairy

	Annual			1992		1993					
	1990	1991	1992	June	Jan	Feb	Mar	Apr	May	June	
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	12.21	11.05	11.88	12.46	10.89	10.74	11.02	12.15	12.52	12.03	
Wholesale prices											
Butter, grade A Ch. (cts./lb.)	102.1	99.3	82.5	78.6	75.3	75.3	75.3	75.3	75.3	76.2	
Am. cheese, Wis., assembly pt. (cts./lb.)	136.7	124.4	131.9	141.3	119.3	118.6	124.3	140.8	141.8	133.7	
Nonfat dry milk (cts./lb.) 2/	100.6	94.0	107.1	116.7	111.0	113.8	113.3	113.9	115.3	112.0	
USDA net removals 3/											
Total milk equiv. (mil. lb.) 4/	9,017.2	10,425.0	8,995.0	804.4	1,633.6	1,546.0	1,137.2	813.2	1,169.7	716.5	
Butter (mil. lb.)	400.3	442.8	440.4	28.5	73.3	87.4	49.1	35.5	51.6	31.3	
Am. cheese (mil. lb.)	21.5	78.9	15.8	0.0	1.8	3.0	2.4	0.4	0.7	0.9	
Nonfat dry milk (mil. lb.)	117.8	269.6	143.2	1.9	47.0	44.4	29.6	23.1	21.1	17.8	
Milk											
Milk prod. 21 States (mil. lb.)	125,772	125,871	128,300	10,897	10,760	9,965	11,087	10,956	11,443	11,008	
Milk per cow (lb.)	14,778	14,977	15,548	1,321	1,310	1,216	1,358	1,344	1,404	1,352	
Number of milk cows (1,000)	8,512	8,391	8,253	8,250	8,215	8,196	8,178	8,153	8,148	8,143	
U.S. milk production (mil. lb.)	148,314	148,477	151,747	8/ 12,893	8/ 12,773	8/ 11,829	8/ 13,161	8/ 12,978	8/ 13,555	8/ 13,040	
Stocks, beginning											
Total (mil. lb.)	9,036	13,359	15,841	20,205	14,215	15,410	15,398	18,327	17,393	18,098	
Commercial (mil. lb.)	4,120	6,146	4,461	4,789	4,688	4,817	4,565	4,597	4,583	4,927	
Government (mil. lb.)	4,918	8,213	11,379	15,415	9,526	10,593	10,831	11,730	12,830	13,171	
Imports, total (mil. lb.)	2,000	2,625	2,522	215	171	135	243	224	244	—	
Commercial disappearance (mil. lb.)	138,922	139,343	142,123	12,294	11,018	10,523	12,072	12,268	12,102	—	
Butter											
Production (mil. lb.)	1,302.2	1,336.8	1,385.2	103.0	144.4	138.9	139.1	124.2	115.1	103.9	
Stocks, beginning (mil. lb.)	256.2	416.1	539.4	712.6	447.7	495.4	497.0	525.0	565.2	582.3	
Commercial disappearance (mil. lb.)	915.2	903.6	943.1	78.6	72.6	75.1	92.4	88.2	59.3	—	
American cheese											
Production (mil. lb.)	2,894.2	2,768.9	2,936.8	261.3	247.8	222.9	236.1	254.8	277.7	266.2	
Stocks, beginning (mil. lb.)	236.2	347.4	318.7	345.8	345.7	352.1	332.5	334.8	330.1	353.0	
Commercial disappearance (mil. lb.)	2,784.4	2,786.7	2,901.1	260.6	240.9	238.9	236.4	261.3	250.7	—	
Other cheese											
Production (mil. lb.)	3,167.0	3,250.0	3,551.7	288.5	261.3	266.0	307.9	297.9	294.0	288.7	
Stocks, beginning (mil. lb.)	93.2	110.6	97.5	115.8	120.9	129.3	124.4	133.3	131.8	131.7	
Commercial disappearance (mil. lb.)	3,426.4	3,539.2	3,795.4	306.1	266.8	284.2	323.7	323.6	317.0	—	
Nonfat dry milk											
Production (mil. lb.)	879.2	877.5	872.1	84.8	76.5	83.6	69.1	90.7	103.8	85.2	
Stocks, beginning (mil. lb.)	49.5	161.9	214.8	137.5	81.2	72.4	71.5	78.5	87.3	113.0	
Commercial disappearance (mil. lb.)	697.6	662.7	714.1	60.9	36.7	39.2	32.9	58.7	56.1	—	
Frozen dessert											
Production (mil. gal.) 5/	1,174.6	1,203.1	1,196.8	125.9	73.4	81.7	101.8	105.3	110.5	124.4	
	Annual			1991		1992		1993			
	1990	1991	1992	IV	I	II	III	IV	I	II	III
Milk production (mil. lb.)	148,314	148,477	151,747	36,270	37,989	39,077	37,515	37,186	37,763	39,573	
Milk per cow (lb.)	14,642	14,660	15,423	3,655	3,852	3,971	3,818	3,782	3,862	4,064	
No. of milk cows (1,000)	10,127	9,992	9,839	9,923	9,863	9,841	9,826	9,827	9,777	9,738	
Milk-feed price ratio 6/	1.71	1.58	1.69	1.77	1.68	1.65	1.75	1.69	1.61	1.68	
Returns over concentrate costs (\$/cwt milk) 6/	10.17	8.95	9.74	10.45	9.60	9.60	10.10	9.75	9.01	9.59	

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area. 3/ Includes products exported through the Dairy Export Incentive Program (DEIP). 4/ Milk equivalent, fat basis. 5/ Hard ice cream, ice milk, & hard sherbet. 6/ Based on average milk price after adjustment for price support deductions.

7/ Less than 50,000 pounds. 8/ Estimated. — = not available.

Information contact: LaVerne T. Williams (202) 219-0770.

Table 15.—Wool

	Annual			1991				1992				1993	
	1990	1991	1992	IV	I	II	III	IV	I	II	III	IV	
U.S. wool price, (cts./lb.) 1/	256	199	204	182	209	222	210	176	146	171	162	146	
Imported wool price, (cts./lb.) 2/	287	187	210	222	250	233	203	189	171	171	171	171	
U.S. mill consumption, scoured													
Apparel wool (1,000 lb.)	120,622	137,187	139,715	33,918	36,929	36,045	34,462	32,279	35,152	35,152	35,152	35,152	
Carpet wool (1,000 lb.)	12,124	14,352	14,726	3,588	4,580	3,523	3,145	3,378	4,917	4,917	4,917	4,917	

1/ Wool price delivered at U.S. mills, clean basis, Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up. 2/ Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. — = not available.

Information contact: John Lawler (202) 219-0840.

Table 16.—Meat Animals

	Annual			1992		1993					
	1990	1991	1992	June	Jan	Feb	Mar	Apr	May	June	
Cattle on feed (7 States)											
Number on feed (1,000 head) 1/	8,378	8,992	8,397	7,826	9,073	9,050	8,761	8,701	8,339	8,343	
Placed on feed (1,000 head)	21,030	19,704	20,498	13,339	18,621	12,262	18,166	13,116	17,781	14,110	
Marketings (1,000 head)	19,198	19,066	18,623	17,712	15,154	14,441	15,566	15,552	16,646	17,723	
Other disappearance (1,000 head)	1,218	1,233	1,198	118	130	110	111	120	131	107	
Beef steer-corn price ratio, Omaha 2/	32.8	31.6	33.3	29.4	39.8	40.0	38.7	37.8	37.5	38.8	
Hog-corn price ratio, Omaha 2/	23.1	21.1	19.0	18.7	20.7	22.2	22.1	20.9	21.7	23.2	
Market prices (\$/cwt)											
Slaughter cattle											
Choice steers, Omaha 1,000-1,100 lb.	77.40	73.83	74.65	74.15	79.15	80.38	82.45	81.47	80.97	78.13	
Choice steers, Neb. Direct, 1,100-1,300 lb.	78.56	74.28	75.36	74.02	79.01	80.34	82.60	82.25	80.39	78.70	
Boning utility cows, Sioux Falls	53.60	50.31	44.84	43.47	46.50	47.25	49.50	49.15	49.00	49.44	
Feeder cattle											
Medium no. 1, Oklahoma City 600-700 lb.	82.15	82.74	85.57	85.19	89.92	89.06	90.49	92.82	83.78	96.33	
Slaughter hogs											
Barrows & gilts, Iowa, S. Minn	55.32	49.69	43.05	48.39	42.18	44.81	47.51	46.09	47.69	48.98	
Feeder pigs											
S. Mo. 40-50 lb. (per head)	51.46	39.84	31.71	27.50	34.63	48.17	51.38	49.35	43.88	38.65	
Slaughter sheep & lambs											
Lambs, Choice, San Angelo	55.54	53.21	61.00	64.50	69.88	73.38	75.50	71.25	62.50	57.75	
Ewes, Good, San Angelo	35.21	31.98	35.39	29.44	39.94	43.44	46.80	31.95	36.29	38.00	
Feeder lambs											
Choice, San Angelo	62.95	53.54	62.09	61.22	73.63	76.09	84.10	71.45	82.50	59.80	
Wholesale meat prices, Midwest											
Boxed beef cut-out value	123.21	118.31	116.73	117.53	122.69	122.13	124.80	126.12	127.19	120.52	
Canner & cutter cow beef	99.98	99.42	93.85	93.14	96.58	97.23	98.13	95.55	98.36	98.66	
Pork loins, 14-18 lb. 3/	117.52	108.39	101.41	113.94	98.22	100.05	100.81	107.61	111.16	122.28	
Pork bellies, 12-14 lb.	53.80	47.79	30.39	32.78	31.97	33.22	41.28	41.19	39.86	36.24	
Hams, skinned, 17-20 lb.	84.87	75.68	67.42	66.13	61.98	68.83	73.78	63.81	63.09	63.59	
All fresh beef retail price 4/	262.48	271.05	268.87	266.14	270.43	272.48	273.21	275.96	278.90	274.03	
Commercial slaughter (1,000 head) 5/											
Cattle	33,241	32,890	32,873	2,924	2,869	2,466	2,775	2,681	2,775	3,013	
Steers	16,587	18,728	17,135	1,614	1,334	1,264	1,434	1,409	1,504	1,611	
Heifers	10,090	9,725	9,236	800	753	690	747	721	766	888	
Cows	5,920	5,823	5,846	452	533	466	542	499	452	473	
Bulls & stags	644	614	653	58	49	46	52	52	53	61	
Calves	1,789	1,438	1,371	108	104	99	119	98	85	94	
Sheep & lambs	5,654	5,722	5,493	438	393	395	489	482	411	478	
Hogs	85,138	88,169	94,888	7,347	7,832	7,092	8,146	8,002	7,145	7,507	
Commercial production (mil. lb.)											
Beef	22,634	22,800	22,968	2,039	1,823	1,877	1,858	1,782	1,857	2,051	
Veal	318	298	299	25	22	21	26	22	20	22	
Lamb & mutton	358	358	343	27	25	25	32	30	27	31	
Pork	15,300	15,948	17,185	1,332	1,435	1,290	1,481	1,465	1,309	1,377	
	Annual			1992				1993			
	1990	1991	1992	I	II	III	IV	I	II	III	
Cattle on feed (13 States)											
Number on feed (1,000 head) 1/	9,943	10,827	10,135	10,135	9,693	8,847	8,920	10,884	10,452	9,403	
Placed on feed (1,000 head)	24,803	23,208	24,246	5,403	5,273	6,107	7,463	5,321	5,284	—	
Marketings (1,000 head)	22,528	22,383	22,081	5,441	5,675	5,768	5,179	5,314	5,783	5,950	
Other disappearance (1,000 head)	1,393	1,517	1,436	404	444	268	320	439	460	—	
Hogs & pigs (10 States) 6/											
Inventory (1,000 head) 1/	42,200	42,900	45,735	45,735	44,800	47,255	49,175	47,140	46,130	47,700	
Breeding (1,000 head) 1/	5,278	5,257	5,610	5,610	5,555	5,845	5,840	5,735	5,730	5,765	
Market (1,000 head) 1/	36,925	37,643	40,125	40,125	39,245	41,410	43,335	41,405	40,400	41,835	
Farrowings (1,000 head)	8,980	9,516	10,202	2,296	2,663	2,521	2,458	2,315	2,630	2,421	
Pig crop (1,000 head)	70,589	75,330	82,497	18,532	21,570	20,559	19,829	18,954	21,362	—	

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Prior to 1984, 8-14 lb., 1984 & 1985, 14-17 lb; beginning 1986, 14-18 lb. 4/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in Table 8. 5/ Classes estimated. 6/ Quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), & Sept.-Nov. (IV). May not add to NASS totals due to rounding. — = not available. \*Intention.

Information contact: Polly Cochran (202) 219-0767.

## Crops &amp; Products

Table 17.—Supply & Utilization<sup>1,2</sup>

	Area			Production	Total supply <sup>4</sup>	Feed and residual	Other domestic Use	Exports	Total use	Ending stocks	Farm price <sup>5</sup>
	Set aside <sup>3</sup>	Planted	Harvested	Yield							
	Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Wheat</b>											
1988/89	22.5	65.5	53.2	34.1	1,812	3,096	150	829	1,415	2,394	702
1989/90	9.6	76.6	62.2	32.7	2,037	2,762	144	849	1,232	2,225	536
1990/91	7.5	77.2	69.3	39.5	2,736	3,309	499	875	1,068	2,443	866
1991/92*	15.9	89.9	57.7	34.3	1,981	2,888	254	893	1,280	2,416	472
1992/93*	7.3	72.3	62.4	39.4	2,459	3,001	196	923	1,354	2,472	529
1993/94*	6.0	72.1	63.9	40.0	2,556	3,180	375	939	1,150	2,464	696
	Mil. acres		Lb./acre				Mil. cwt (rough equiv.)				\$/cwt
<b>Rice</b>											
1988/89	1.09	2.93	2.90	5,514	159.9	195.1	—	82.5	85.9	168.4	26.7
1989/90	1.18	2.73	2.69	5,749	164.5	185.6	—	82.1	77.2	159.3	26.4
1990/91	1.02	2.00	2.82	5,529	156.1	187.2	—	91.7	70.9	162.7	24.8
1991/92*	0.9	2.88	2.78	5,674	157.5	187.3	—	93.7	66.4	180.1	27.3
1992/93*	0.4	3.17	3.13	5,722	179.1	212.4	—	97.5	79.0	178.5	35.9
1993/94*	0.6	3.02	2.97	5,713	189.7	212.0	—	100.5	80.0	180.5	31.5
	Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Corn</b>											
1988/89	20.5	67.7	58.3	84.8	4,829	9,191	3,941	1,293	2,026	7,260	1,930
1989/90	10.8	72.2	64.7	116.3	7,525	9,458	4,389	1,356	2,368	8,113	1,344
1990/91	10.7	74.2	67.0	118.5	7,934	9,282	4,663	1,873	1,725	7,781	1,521
1991/92*	7.4	76.0	68.8	108.8	7,475	9,016	4,878	1,454	1,584	7,918	1,100
1992/93*	5.3	79.3	72.1	131.4	9,479	10,585	5,250	1,510	1,875	8,435	2,150
1993/94*	9.0	73.7	64.0	116.0	7,423	9,583	5,150	1,550	1,475	8,176	1,408
	Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Sorghum</b>											
1988/89	3.9	10.3	9.0	63.8	577	1,239	466	22	311	800	440
1989/90	3.3	12.8	11.1	55.4	615	1,055	517	15	303	835	220
1990/91	3.3	10.5	9.1	63.1	573	793	410	9	232	651	143
1991/92*	2.5	11.1	9.9	58.3	585	727	374	9	292	674	53
1992/93*	2.0	13.3	12.2	72.8	884	937	475	8	275	758	180
1993/94*	2.0	10.7	9.7	65.9	642	822	425	8	275	708	115
	Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Barley</b>											
1988/89	2.8	9.8	7.6	38.0	290	822	171	175	79	425	196
1989/90	2.3	9.1	8.3	48.6	404	814	183	175	84	453	161
1990/91	2.9	8.2	7.5	58.1	422	596	205	178	81	461	135
1991/92*	2.2	8.9	8.4	55.2	484	624	230	171	94	496	129
1992/93*	2.3	7.8	7.3	62.4	456	598	199	185	80	445	152
1993/94*	2.2	7.9	7.6	61.9	487	838	225	165	80	470	168
	Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Oats</b>											
1988/89	0.3	13.9	5.5	39.3	218	392	194	100	1	294	98
1989/90	0.4	12.1	6.9	54.3	374	538	268	115	1	381	157
1990/91	0.2	10.4	5.9	80.1	358	578	286	120	1	407	171
1991/92*	0.6	8.7	4.8	50.7	243	489	235	125	2	362	128
1992/93*	0.7	8.0	4.5	65.8	295	477	233	125	6	364	113
1993/94*	0.8	8.1	4.1	60.7	250	428	205	125	5	335	93
	Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Soybeans</b>											
1988/89	0	58.8	57.4	27.0	1,549	1,855	7/ 88	1,058	527	1,673	182
1989/90	0	50.8	59.5	32.3	1,924	2,109	7/ 101	1,146	623	1,870	239
1990/91	0	57.8	56.5	34.1	1,926	2,168	7/ 95	1,187	557	1,839	329
1991/92*	0	59.2	58.0	34.2	1,987	2,310	7/ 103	1,254	684	2,041	278
1992/93*	0	59.3	58.4	37.8	2,197	2,477	7 132	1,280	775	2,187	290
1993/94*	0	59.5	66.3	33.8	1,902	2,197	7/ 112	1,250	655	2,007	190
	Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Soybean oil</b>											
1988/89	—	—	—	—	11,737	13,987	—	10,591	1,661	12,252	1,715
1989/90	—	—	—	—	13,004	14,741	—	12,083	1,353	13,438	1,305
1990/91	—	—	—	—	13,408	14,730	—	12,164	780	12,944	1,788
1991/92*	—	—	—	—	14,345	16,132	—	12,245	1,648	13,893	2,238
1992/93*	—	—	—	—	13,734	15,975	—	12,700	1,525	14,225	1,750
1993/94*	—	—	—	—	14,120	15,900	—	12,850	1,500	14,350	1,550
	Mil. lbs.		1,000 tons				Mil. lbs.				\$/ Cts./lb.
<b>Soybean meal</b>											
1988/89	—	—	—	—	24,943	25,100	—	19,657	5,270	24,927	173
1989/90	—	—	—	—	27,719	27,900	—	22,263	5,319	27,682	318
1990/91	—	—	—	—	28,326	28,688	—	22,934	5,469	28,403	285
1991/92*	—	—	—	—	29,831	30,183	—	23,008	6,945	28,953	230
1992/93*	—	—	—	—	30,210	30,550	—	23,950	6,300	30,250	300
1993/94*	—	—	—	—	29,685	30,100	—	24,100	5,700	29,800	300
	Mil. lbs.		1,000 tons				Mil. lbs.				\$/ \$/ton

See footnotes at end of table.

Table 17.—Supply &amp; Utilization, continued

	Area			Production	Total supply <sup>4/</sup>	Feed and residual	Other domestic use	Exports	Total Use	Ending Stocks	Farm price <sup>5/</sup>
	Set Aside <sup>3/</sup>	Planted	Harvested	Yield							
Mil. acres											
				Lb./acre							Cts./lb.
Cotton 10/											
1988/89	2.2	12.5	11.9	618	15.4	21.2	—	7.8	6.1	13.9	7.1
1989/90	3.5	10.6	8.5	614	12.2	19.3	—	8.8	7.7	16.5	3.0
1990/91	2.0	12.3	11.7	634	15.5	18.5	—	8.7	7.8	16.5	2.3
1991/92*	1.2	14.1	13.0	652	17.8	20.0	—	9.8	6.7	16.3	3.7
1992/93*	1.7	13.2	11.1	699	16.2	19.9	—	10.2	5.2	15.4	4.6
1993/94*	1.4	13.7	13.3	668	18.5	23.1	—	10.3	6.3	16.6	6.6

\*August 11, 1993 Supply & Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats; August 1 for cotton & rice; September 1 for soybeans, corn, & sorghum; October 1 for soymeal & soyoil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres; 1 metric ton = 2204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9298 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, & 4.59 480-pound bales of cotton. 3/ Includes diversion, acreage reduction, 80-92, & 0-92 programs. 0/92 & 50/92 set-asides includes idled acreage & acreage planted to minor oilseeds, sesame, and crambe. 4/ Includes imports. 5/ Marketing-year weighted average price received by farmers. Does not include an allowance for loans outstanding & Government purchases. 6/ Residual included in domestic use. 7/ Includes seed. 8/ Simple average of crude soybean oil, Decatur. 9/ Simple average of 48 percent, Decatur, 10/ Upland & extra long staple. Stock estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. 11/ Weighted average for August 1-April 1; not a projection for the marketing year. 12/ USDA is prohibited from publishing cotton price projections. — = not available or not applicable. Note: Set-aside data for 1993 are from June 15 signup report.

Information contact: Commodity Economics Division, Crops Branch (202) 219-0840.

Table 18.—Cash Prices, Selected U.S. Commodities

	Marketing year 1/				1992		1993			
	1988/89	1989/90	1990/91	1991/92	June	Feb	Mar	Apr	May	June
Wheat, No. 1 HRW, Kansas City (\$/bu.) 2/	4.17	4.22	2.94	3.77	3.91	3.75	3.74	3.59	3.51	3.33
Wheat, DNS, Minneapolis (\$/bu.) 3/	4.36	4.16	3.08	3.82	4.42	3.87	3.87	3.80	3.71	3.66
Rice, S. W. Lb. (\$/cwt) 4/	14.85	16.55	16.26	16.48	16.10	13.00	12.60	12.15	11.90	11.75
Corn, no. 2 yellow, 30 day, Chicago (\$/bu.)	2.68	2.54	2.41	2.52	2.58	2.14	2.23	2.32	2.29	2.2
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	4.17	4.21	4.08	4.38	4.51	3.66	3.70	3.72	3.82	3.58
Barley, feed, Duluth (\$/bu.) 5/	2.32	2.20	2.13	2.17	2.30	2.08	2.12	2.12	2.05	1.99
Barley, malting, Minneapolis (\$/bu.)	4.11	3.28	2.42	2.38	2.58	2.32	2.33	2.34	2.34	2.3
U.S. price, SLM, 1-1/16 in. (cts./lb.) 6/	57.7	69.8	74.8	66.7	58.8	55.4	56.5	56.2	56.4	54.4
Northern Europe prices Index (cts./lb.) 7/	68.4	82.3	82.9	82.9	84.4	80.8	81.4	80.9	80.9	58.5
U.S. M 1-3/32 in. (cts./lb.) 8/	59.2	83.6	88.2	66.3	87.7	86.1	86.8	86.3	85.1	83.0
Soybeans, no. 1 yellow, 30 day, Chicago (\$/bu.)	7.41	6.88	6.76	6.75	6.94	6.56	6.59	6.88	5.99	5.64
Soybean oil, crude, Decatur (cts./lb.)	21.10	22.30	21.00	19.10	20.71	20.72	21.00	21.24	20.15	21.30
Soybean meal, 48% protein, Decatur (\$/ton) 9/	252.40	186.50	181.40	189.20	203.90	179.90	183.60	187.40	187.40	223.00

1/ Beginning June 1 for wheat & barley; Aug. 1 for rice & cotton; Sept. 1 for corn, sorghum & soybeans; Oct. 1 for soymeal & oil. 2/ Ordinary protein. 3/ 14% protein. 4/ Long grain, milled basis. 5/ Beginning Mar. 1987 reporting point changed from Minneapolis to Duluth. 6/ Average spot market. 7/ Liverpool Cotlook "A" Index; average of five lowest prices of 13 selected growths. 8/ Memphis territory growths. 9/ Note change to 48% protein. NQ = no quotation.

Information contacts: Wheat, rice, & feed grains, Jenny Gonzales (202) 219-0840; Cotton, Lee Meyer (202) 219-0840; Soybeans, Brenda Toland, (202) 219-0840.

Table 19.—Farm Programs, Price Supports, Participation &amp; Payment Rates

Target price	Basic loan rate <sup>a</sup>	Findley or announced loan rate <sup>b</sup>	Payment rates				Effective base acres <sup>2/</sup>	Program 3/	Participation rate <sup>4/</sup>			
			Paid land diversion									
			Total deficiency	Mandatory	Optional							
\$/bu.												
Wheat												
1987/88	4.38	2.85	2.28	1.81	—	—	87.6	27.5/0/0	88			
1988/89	4.23	2.78	2.21	0.89	—	—	84.8	27.5/0/0	88			
1989/90	4.10	2.58	2.08	0.32	—	—	82.3	10/0/0	78			
1990/91 5/	4.00	2.44	1.95	1.28	—	—	80.5	6/ 5/0/0	83			
1991/92	4.00	2.52	2.04	1.35	—	—	79.2	15/0/0	85			
1992/93	4.00	2.58	2.21	0.81	—	—	78.9	5/0/0	83			
1993/94	4.00	2.86	2.45	1.05	—	—	78.5	0/0/0	87			
1994/95	—	—	—	—	—	—	—	0/0/0	—			
\$/cwt												
Rice												
1987/88	11.68	6.84	7/ 6.16	4.82	—	—	4.2	35/0/0	96			
1988/89	11.15	6.83	7/ 6.50	4.31	—	—	4.2	25/0/0	94			
1989/90	10.80	6.50	7/ 6.00	3.56	—	—	4.2	25/0/0	94			
1990/91 5/	10.71	6.50	7/ 6.40	4.16	—	—	4.2	20/0/0	95			
1991/92	10.71	6.50	7/ 5.85	3.07	—	—	4.2	5/0/0	95			
1992/93	10.71	6.50	—	4.21	—	—	4.1	0/0/0	96			
1993/94	10.71	6.50	—	4.21	—	—	4.1	5/0/0	96			
\$/bu.												
Corn												
1987/88	3.03	2.28	1.82	1.09	—	2.00	81.5	20/0/15	90			
1988/89	2.93	2.21	1.77	0.36	—	1.75	82.9	20/0/10	87			
1989/90	2.84	2.06	1.65	0.58	—	—	82.7	10/0/0	79			
1990/91 5/	2.75	1.96	1.57	0.51	—	—	82.6	10/0/0	78			
1991/92	2.75	1.89	1.62	0.41	—	—	82.7	7.5/0/0	77			
1992/93	2.75	2.01	1.72	0.73	—	—	82.1	5/0/0	78			
1993/94	2.75	1.89	1.72	0.72	—	—	81.9	10/0/0	81			
\$/bu.												
Sorghum												
1987/88	2.88	2.17	1.74	1.14	—	1.90	17.4	8/ 20/0/15	84			
1988/89	2.78	2.10	1.68	0.48	—	1.65	16.8	20/0/10	82			
1989/90	2.70	1.96	1.57	0.66	—	—	16.2	10/0/0	71			
1990/91 5/	2.61	1.86	1.49	0.56	—	—	15.4	10/0/0	70			
1991/92	2.61	1.80	1.54	0.37	—	—	13.5	7.5/0/0	77			
1992/93	2.61	1.91	1.63	0.70	—	—	13.8	5/0/0	79			
1993/94	2.61	1.89	1.63	0.70	—	—	13.5	5/0/0	81			
\$/bu.												
Barley												
1987/88	2.60	1.88	1.49	0.79	—	1.60	12.5	8/ 20/0/15	85			
1988/89	2.51	1.80	1.44	0.00	—	1.40	12.5	20/0/10	79			
1989/90	2.44	1.88	1.34	0.00	—	—	12.3	10/0/0	67			
1990/91 5/	2.36	1.66	1.28	0.20	—	—	11.9	10/0/0	68			
1991/92	2.36	1.54	1.32	0.62	—	—	11.5	7.5/0/0	76			
1992/93	2.36	1.64	1.40	0.56	—	—	11.1	5/0/0	75			
1993/94	2.36	1.62	1.40	0.52	—	—	10.8	0/0/0	82			
\$/bu.												
Oats												
1987/88	1.60	1.17	0.94	0.20	—	0.80	8.4	8/ 20/0/16	45			
1988/89	1.55	1.14	0.91	0.00	—	—	7.9	5/0/0	30			
1989/90	1.50	1.06	0.85	0.00	—	—	7.6	5/0/0	18			
1990/91 5/	1.45	1.01	0.81	0.32	—	—	7.5	5/0/0	09			
1991/92	1.45	0.97	0.83	0.35	—	—	7.3	0/0/0	38			
1992/93	1.45	1.03	0.88	0.17	—	—	7.2	0/0/0	40			
1993/94	1.45	1.02	0.88	0.15	—	—	7.1	0/0/0	46			
\$/bu.												
Soybeans 9/												
1987/88	—	—	4.77	—	—	—	—	—	—	—		
1988/89	—	—	4.77	—	—	—	—	10/ 10/25	—	—		
1989/90	—	—	4.53	—	—	—	—	10/ 0/25	—	—		
1990/91 5/	—	—	4.50	—	—	—	—	10/ 0/25	—	—		
1991/92	—	—	5.02	—	—	—	—	10/ 0/25	—	—		
1992/93	—	—	5.02	—	—	—	—	10/ 0/25	—	—		
1993/94	—	—	5.02	—	—	—	—	10/ 0/25	—	—		
Cts./lb.												
Upland cotton												
1987/88	79.4	52.25	11/ 52.25	17.3	—	—	14.5	25/0/0	93			
1988/89	75.9	51.80	11/ 51.80	19.4	—	—	14.5	12.5/0/0	89			
1989/90	73.4	60.00	11/ 50.00	13.1	—	—	14.6	25/0/0	89			
1990/91 5/	72.9	50.27	11/ 50.27	7.3	—	—	14.4	12.5/0/0	86			
1991/92 12/	72.9	50.77	11/ 47.23	10.1	—	—	14.8	5/0/0	84			
1992/93	72.9	52.35	11/ —	20.3	—	—	14.9	10/0/0	89			
1993/94	72.9	52.35	11/ —	20.55	—	—	15.1	7.5/0/0	90			

1/ There are no Findley loan rates for rice or cotton. See footnotes 7 &amp; 11. 2/ National effective crop acreage base as determined by ASCS. Net of CRP.

3/ Program requirements for participating producers (mandatory acreage reduction program/mandatory paid land diversion/optional paid land diversion). Acres idled must be devoted to a conserving use to receive program benefits. 4/ Percentage of effective base acres enrolled in acreage reduction programs. 5/ Payments & loans were reduced by 1.4 percent in 1990/91 due to Gramm-Rudman-Hollings Budget Reconciliation Act reductions to deficiency payments rates were also in effect in that year. Data do not include these reductions. 6/ Under 1990 modified contracts, participating producers plant up to 105 percent of their wheat base acres. For every acre planted above 95 percent of base, the acreage used to compute deficiency payments was cut by 1 acre. 7/ A marketing loan has been in effect for rice since 1985/86. Loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price (announced weekly). However, loans cannot be repaid at less than a specified fraction of the loan rate. Data refer to market-year average loan repayment rates. 8/ The sorghum, oats, & barley programs are the same as for corn except as indicated. 9/ There are no target prices, base acres, acreage reduction programs, or deficiency payment rates for soybeans. 10/ Nominal percentage of program crop base acres permitted to shift into soybeans without loss of base. 11/ A marketing loan has been in effect for cotton since 1986/87. In 1987/88 & after, loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price (announced weekly; Plan B). Starting in 1991/92, loans cannot be repaid at less than 70 percent of the loan rate. Data refer to annual average loan repayment rates. 12/ A marketing certificate program was implemented on Aug. 1, 1991. — = not available.

\* For wheat, the 1991/92 rate is the total deficiency payment rate for the "regular" Program. For the winter wheat option, the rate is \$1.25.

\*\* For wheat, corn, sorghum, barley, and oats, regular deficiency payment rate based on the 5-month price. For rice and upland cotton, total deficiency payment rate.

\*\*\* Estimated total deficiency payment rate. Minimum guaranteed payment rate for 9/92 (wheat &amp; feed grains) &amp; 5/9/92 (rice and upland cotton) programs. Sign-up for 1993 programs was March 1-April 30, 1993.

Note: 1993 effective base acres and participation rates are from June 15 signup report

Information contact: Commodity Economics Division, Crops Branch (202) 219-0840.

Table 20.—Fruit

	1984	1985	1986	1987	1988	1989	1990	1991	1992 P
Citrus 1/									
Production (1,000 ton)	10,832	10,625	11,058	11,993	12,761	13,186	10,860	11,285	12,449
Per capita consumpt. (lbs.) 2/	22.5	21.5	24.2	23.9	26.4	23.5	21.4	19.1	24.3
Noncitrus 3/									
Production (1,000 tons)	14,301	14,191	13,874	16,011	15,893	16,365	15,657	15,750	17,142
Per capita consumpt. (lbs.) 2/	66.2	65.1	68.7	73.4	71.7	73.0	70.8	70.8	74.4
	1992							1993	
F.o.b. shipping point prices	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Apples (\$/carton) 4/	15.38	14.46	13.80	14.50	12.33	10.66	11.33	11.50	11.50
Pears (\$/box) 5/	13.05	13.54	13.86	16.00	16.00	16.00	16.08	16.28	18.28
Grower prices									
Oranges (\$/box) 6/	1.79	3.80	2.90	2.66	2.39	2.11	3.23	3.65	3.89
Grapefruit (\$/box) 6/	7.09	4.11	4.66	3.00	2.42	1.48	2.13	1.62	0.98
Stocks, ending									
Fresh apples (mil. lbs.)	5,580.0	4,988.3	4,077.3	3,433.1	2,769.3	2,011.1	1,341.5	895.1	488.1
Fresh pears (mil. lbs.)	380.4	276.7	223.4	174.2	128.1	81.7	50.8	23.3	1.6
Frozen fruits (mil. lbs.)	1,073.5	1,008.2	888.4	823.3	642.1	744.8	690.3	661.6	703.2
Frozen orange juice (mil. lbs.)	666.2	638.0	892.9	1,135.9	1,289.4	1,283.7	1,440.9	1,462.3	1,355.7

1/ 1992 indicated 1991/92 season. 2/ Fresh per capita consumption. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. P = preliminary.

Information contact: Wynnice Napper (202) 219-0884.

Table 21.—Vegetables

	Calender year									
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992 P
<b>Production</b>										
Total vegetables (1,000 cwt)	403,509	456,334	453,030	448,629	478,381	468,779	542,437	561,704	564,582	534,951
Fresh (1,000 cwt) 1/ 3/	185,782	201,817	203,549	203,185	220,539	228,397	239,281	239,104	229,508	236,140
Processed (tons) 2/ 3/	10,886,350	12,725,880	12,474,040	12,273,200	12,892,100	12,019,110	15,157,790	18,130,020	18,753,820	14,840,550
Mushrooms (1,000 lbs.) 4/	561,531	595,681	587,956	614,393	631,819	687,759	714,902	749,151	738,832	—
Potatoes (1,000 cwt)	333,728	362,039	406,809	361,743	389,320	358,438	370,444	402,110	417,822	411,638
Sweetpotatoes (1,000 cwt)	12,083	12,902	14,573	12,388	11,811	10,945	11,358	12,594	11,203	11,780
Dry edible beans (1,000 cwt)	15,520	21,070	22,298	22,980	26,031	18,253	23,729	32,379	33,785	22,047
1992										
<b>Shipments (1,000 cwt)</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>July</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>
Fresh	17,527	26,955	28,050	29,058	22,410	18,977	24,099	18,958	25,574	36,353
Iceberg lettuce	4,344	5,194	5,274	4,811	4,850	4,172	5,054	3,570	5,031	5,316
Tomatoes, all	2,463	3,281	3,554	3,499	2,957	3,108	3,885	2,865	2,540	4,229
Dry-bulb onions	2,591	3,406	2,752	2,788	2,648	2,747	3,390	2,448	2,989	3,720
Other 5/	8,129	15,074	16,470	17,960	11,855	8,949	11,770	10,073	15,014	23,088
Potatoes, all	16,653	21,011	17,628	12,885	9,851	11,180	18,545	18,489	17,948	14,284
Sweetpotatoes	277	397	212	190	154	270	468	334	218	244

1/ Includes fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 2/ Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, & cauliflower. 3/ Asparagus & cucumber estimates were not available for 1982 & 1983. 4/ Fresh & processing agaricus mushrooms only. Excludes specialty varieties. Crop year July 1 - June 30. 5/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, bell peppers, squash, cantaloupes, honeydews, & watermelons. p = preliminary.

Information contacts: Gary Lucier or John Love (202) 219-0884.

Table 22.—Other Commodities

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured.

Oct.-Sept. for burley, 4-7 taxable removals. — = not available.

## World Agriculture

Table 23.—World Supply & Utilization of Major Crops, Livestock & Products

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92 P	1992/93 F
Million units							
<b>Wheat</b>							
Area (hectares)	228.0	219.7	217.4	225.8	231.5	222.3	222.3
Production (metric tons)	524.1	496.0	495.0	533.0	587.9	542.5	558.8
Exports (metric tons) 1/	90.7	112.1	102.9	102.0	101.6	108.5	108.8
Consumption (metric tons) 2/	515.8	525.0	525.3	531.9	563.9	559.6	552.7
Ending stocks (metric tons) 3/	176.0	148.9	118.7	119.8	143.7	126.8	132.7
<b>Coarse grains</b>							
Area (hectares)	335.2	323.0	323.1	320.7	313.6	317.5	317.7
Production (metric tons)	822.1	783.6	720.8	790.3	820.1	800.9	854.5
Exports (metric tons) 1/	82.9	88.3	95.2	103.8	88.1	93.4	87.9
Consumption (metric tons) 2/	796.2	806.8	784.8	813.4	807.9	807.6	830.8
Ending stocks (metric tons) 3/	235.2	215.0	151.0	127.9	140.3	133.5	157.4
<b>Rice, milled</b>							
Area (hectares)	145.1	141.7	145.4	146.8	147.1	145.5	144.9
Production (metric tons)	318.7	314.5	330.0	342.8	350.7	348.3	350.7
Exports (metric tons) 4/	12.9	11.2	13.9	11.9	12.1	14.1	13.8
Consumption (metric tons) 2/	320.8	319.9	327.7	335.9	345.7	352.9	353.2
Ending stocks (metric tons) 3/	50.9	45.5	47.8	54.5	59.5	54.9	52.4
<b>Total grains</b>							
Area (hectares)	708.3	684.4	685.9	693.3	692.2	685.3	684.9
Production (metric tons)	1,662.9	1,594.1	1,545.8	1,665.9	1,758.7	1,691.7	1,764.0
Exports (metric tons) 1/	185.5	211.6	212.0	217.7	201.8	216.0	210.3
Consumption (metric tons) 2/	1,632.6	1,651.5	1,637.8	1,681.2	1,717.5	1,720.1	1,736.5
Ending stocks (metric tons) 3/	464.1	409.4	317.5	302.2	343.5	315.0	342.5
<b>Oilseeds</b>							
Crush (metric tons)	161.8	168.4	164.5	172.0	177.4	185.3	185.3
Production (metric tons)	194.9	210.5	201.8	212.5	215.9	223.5	227.3
Exports (metric tons)	37.7	39.5	31.5	35.5	33.0	37.1	38.1
Ending stocks (metric tons)	23.3	24.0	22.1	23.3	23.2	21.7	22.8
<b>Meals</b>							
Production (metric tons)	110.7	115.4	111.1	117.1	119.8	125.2	125.7
Exports (metric tons)	36.7	35.8	37.4	39.9	40.8	43.2	42.0
<b>Oils</b>							
Production (metric tons)	50.4	53.3	53.3	57.1	58.3	60.6	61.1
Exports (metric tons)	16.9	17.5	18.1	20.4	20.6	20.9	20.6
<b>Cotton</b>							
Area (hectares)	29.2	30.8	33.7	31.5	33.1	34.7	32.7
Production (bales)	70.8	81.1	84.4	79.9	87.0	96.0	82.5
Exports (bales)	33.4	29.9	33.1	31.3	29.8	28.3	25.2
Consumption (bales)	82.8	84.1	85.3	86.7	85.5	84.5	86.0
Ending stocks (bales)	35.7	32.8	31.9	26.3	28.6	40.8	37.8
	1987	1988	1989	1990	1991	1992	1993 F
<b>Red meat</b>							
Production (metric tons)	112.9	116.6	118.1	120.3	121.3	121.3	123.1
Consumption (metric tons)	111.0	114.6	116.7	118.1	119.3	119.8	121.5
Exports (metric tons) 1/	8.7	7.4	7.8	7.8	8.0	7.8	8.0
<b>Poultry 5/</b>							
Production (metric tons)	31.3	32.7	34.0	35.8	37.8	39.2	41.0
Consumption (metric tons)	30.8	32.0	33.2	34.9	37.1	38.8	40.6
Exports (metric tons) 1/	1.5	1.8	1.8	2.1	2.1	2.4	2.6
<b>Dairy</b>							
Milk production (metric tons)	425.7	428.9	434.7	442.0	429.4	415.0	407.9

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stock data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; Includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1987 data correspond with 1986/87, etc. 5/ Poultry excludes the Peoples Republic of China before 1988. P = preliminary. F = forecast.

Information contacts: Crops, Carol Whitton (202) 219-0824; red meat & poultry, Linda Bailey (202) 219-1285; dairy, Sara Short (202) 219-0770.

## U.S. Agricultural Trade

**Table 24.—Prices of Principal U.S. Agricultural Trade Products**

	Annual			1992		1993				
	1990	1991	1992	June	Jan	Feb	Mar	Apr	May	June
Export commodities										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.72	3.52	4.13	4.04	4.25	4.06	4.05	3.87	3.70	3.31
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.79	2.75	2.66	2.81	2.43	2.42	4.49	2.57	2.51	2.37
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.65	2.69	2.63	2.70	2.44	2.42	2.46	2.44	2.42	2.3
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	6.24	6.05	6.01	8.36	8.08	8.03	8.09	6.18	6.28	8.27
Soybean oil, Decatur (cts./lb.)	22.75	20.14	19.18	20.68	21.20	20.81	21.01	21.29	21.28	21.21
Soybean meal, Decatur (\$/ton)	169.37	172.90	177.79	181.36	188.18	179.87	183.37	187.42	193.74	193.41
Cotton, 7-market avg. spot (cts./lb.)	71.25	69.69	53.90	58.82	53.72	55.38	56.45	56.16	56.36	54.38
Tobacco, avg. price at auction (cts./lb.)	169.61	179.23	172.58	158.01	179.98	186.53	186.53	157.44	157.44	157.44
Rice, f.o.b. mill, Houston (\$/cwt)	15.52	16.48	16.80	17.25	15.25	15.00	15.00	15.00	14.18	13.35
Inedible tallow, Chicago (cts./lb.)	13.54	13.26	14.37	13.75	15.09	14.69	15.24	15.94	15.00	15.11
Import commodities										
Coffee, N.Y. spot (\$/lb.)	0.81	0.71	0.50	0.46	0.58	0.54	0.56	0.51	0.53	0.52
Rubber, N.Y. spot (cts./lb.)	46.28	45.73	46.25	46.57	48.03	48.30	46.41	44.17	43.78	43.78
Cocoa beans, N.Y. (\$/lb.)	0.55	0.52	0.47	0.40	0.45	0.42	0.41	0.43	0.42	0.41

Information contact: Mary Teymourian (202) 219-0824

**Table 25.—Indexes of Real Trade-Weighted Dollar Exchange Rates<sup>1/</sup>**

	1992					1993					
	Aug	Sept	Oct	Nov	Dec	Jan P	Feb P	Mar P	Apr P	May P	
	1985 = 100										
Total U.S. trade 2/	59.0	59.5	61.9	65.6	65.8	67.3	68.4	68.3	66.1	66.9	66.4
Agricultural trade											
U.S. markets	74.2	74.2	75.2	77.6	77.3	78.2	78.4	78.3	77.0	77.3	78.1
U.S. competitors	75.1	77.2	75.7	77.7	77.4	78.3	78.6	79.1	78.4	78.9	77.7
Wheat											
U.S. markets	94.2	94.1	94.1	96.5	95.9	97.3	98.1	99.8	98.8	99.7	95.2
U.S. competitors	69.3	74.4	71.2	73.3	73.3	74.1	73.7	73.0	72.6	72.9	74.6
Soybeans											
U.S. markets	60.7	60.4	61.9	64.6	64.2	65.6	65.9	65.5	63.9	64.3	63.7
U.S. competitors	54.2	53.0	53.3	53.6	53.0	53.3	53.7	53.9	53.8	54.0	49.8
Corn											
U.S. markets	67.1	68.4	67.3	69.2	68.9	69.6	69.3	68.8	67.1	67.1	66.1
U.S. competitors	55.7	55.5	56.9	57.5	57.2	57.6	57.7	57.6	56.3	56.4	58.0
Cotton											
U.S. markets	71.2	70.7	71.6	73.3	73.4	74.1	74.1	73.8	72.4	72.6	71.1
U.S. competitors	109.3	112.1	109.7	110.7	108.4	110.5	110.2	110.4	110.0	110.3	108.1

1/ Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. 2/ Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. P = preliminary.

Information contact: Tim Baxter (202) 219-0718.

**Table 26.—Trade Balance**

	Fiscal year 1/									May
	1986	1987	1988	1989	1990	1991	1992	1993 F	1993	
\$ million										
Exports										
Agricultural	26,312	27,876	35,318	39,590	40,220	37,609	42,417	42,500	3,366	
Nonagricultural	179,291	202,911	258,656	301,269	328,059	356,682	377,278	—	34,233	
Total 2/	205,603	230,787	293,972	340,859	366,279	394,291	419,695	—	37,599	
Imports										
Agricultural	20,884	20,850	21,014	21,476	22,560	22,588	24,323	25,000	2,121	
Nonagricultural	342,846	367,374	409,138	441,075	458,101	463,720	487,554	—	43,740	
Total 3/	363,730	388,024	430,152	462,551	480,661	486,308	511,877	—	45,861	
Trade balance										
Agricultural	5,428	7,226	14,302	18,114	17,660	15,021	18,094	17,500	1,245	
Nonagricultural	-163,555	-164,463	-150,482	-139,806	-132,042	-107,038	-110,276	—	-9,507	
Total	-158,127	-157,237	-136,180	-121,692	-114,382	-92,017	-92,182	—	-8,282	

1/ Fiscal years begin October 1 & end September 30. Fiscal year 1992 began Oct. 1, 1991 & ended Sept. 30, 1992. 2/ Domestic exports including Department of Defense shipments (F.A.S. value). 3/ Imports for consumption (customs value). F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 219-0822.

Table 27.—U.S. Agricultural Exports &amp; Imports

	Fiscal year*			May	Fiscal year*			May
	1991	1992	1993 F		1991	1992	1993 F	
	1,000 units			\$ million				
<b>EXPORTS</b>								
Animals, live (no.) 1/	1,235	1,477	—	95	548	587	—	25
Meats & preps., excl. poultry (mt)	936	1,108	2/ 900	102	2,773	3,236	—	301
Dairy products (mt) 1/	44	172	—	16	293	638	900	63
Poultry meats (mt)	628	795	900	91	737	915	—	91
Fats, oils, & greases (mt)	1,169	1,392	1,500	98	419	498	—	38
Hides & skins incl. furskins	—	—	—	—	1,451	1,337	—	115
Cattle hides, whole (no.) 1/	21,548	20,822	—	1,699	1,191	1,107	—	90
Mink pelts (no.) 1/	3,941	3,160	—	604	74	52	—	11
Grains & feeds (mt)	94,583	100,744	—	8,064	12,175	13,858	3/ 14,200	1,107
Wheat (mt)	26,792	34,287	35,500	2,845	2,867	4,318	4/ 4,800	378
Wheat flour (mt)	987	816	1,000	104	191	165	—	21
Rice (mt)	2,395	2,279	2,400	236	747	757	700	62
Feed grains, incl. products (mt)	52,353	50,646	53,300	3,701	5,790	5,793	5,300	394
Feeds & fodders (mt)	10,943	11,267	5/ 12,300	1,027	1,882	2,019	—	173
Other grain products (mt)	1,113	1,449	—	151	697	807	—	80
Fruits, nuts, & preps. (mt)	2,849	3,505	—	285	3,038	3,514	3,600	303
Fruit juices incl.								
froz. (1,000 hectoliters) 1/	6,311	7,767	—	765	338	427	—	42
Vegetables & preps. (mt)	2,590	2,704	—	277	2,597	2,790	—	302
Tobacco, unmanufactured (mt)	239	246	—	17	1,533	1,568	1,600	117
Cotton, excl. linters (mt)	1,565	1,494	1,300	92	2,605	2,183	1,700	125
Seeds (mt)	514	701	—	73	617	659	700	29
Sugar, cane or beet (mt)	589	492	—	20	219	154	—	7
Oilseeds & products (mt)	22,285	28,842	—	1,787	5,643	7,156	7,500	452
Oilseeds (mt)	15,615	19,970	—	998	3,807	4,743	—	249
Soybeans (mt)	15,139	19,247	20,300	945	3,465	4,311	4,500	220
Protein meal (mt)	5,828	7,022	—	637	1,113	1,431	—	115
Vegetable oils (mt)	1,051	1,650	—	152	723	982	—	89
Essential oils (mt)	13	13	—	1	183	184	—	16
Other	499	490	—	6	2,441	2,733	—	231
Total	128,513	142,498	150,000	10,929	37,609	42,417	42,500	3,366
<b>IMPORTS</b>								
Animals, live (no.) 1/	3,168	2,830	—	279	1,131	1,276	1,600	122
Meats & preps., excl. poultry (mt)	1,191	1,134	—	91	3,016	2,684	—	221
Beef & veal (mt)	811	813	780	66	2,025	1,933	1,900	162
Pork (mt)	322	263	230	20	865	825	700	47
Dairy products (mt) 1/	231	232	—	20	787	816	900	72
Poultry & products 1/	—	—	—	—	119	132	—	10
Fats, oils, & greases (mt)	33	46	—	5	19	26	—	3
Hides & skins, incl. furskins 1/	—	—	—	—	153	185	—	16
Wool, unmanufactured (mt)	50	54	—	8	175	167	—	16
Grains & feeds (mt)	4,189	5,446	4,900	420	1,282	1,548	1,600	134
Fruits, nuts, & preps., excl. juices (mt)	5,650	5,883	5,900	591	2,741	2,919	—	297
Bananas & plantains (mt)	3,399	3,626	3,800	348	993	1,083	1,100	105
Fruit juices (1,000 hectoliters) 1/	27,948	26,049	24,000	1,794	737	871	—	40
Vegetables & preps. (mt)	2,418	2,171	—	209	2,183	2,125	2,400	213
Tobacco, unmanufactured (mt)	215	364	370	48	898	1,299	1,100	165
Cotton, unmanufactured (mt)	19	11	—	1	18	10	—	1
Seeds (mt)	169	174	200	15	173	214	200	18
Nursery stock & cut flowers 1/	—	—	—	—	538	578	—	52
Sugar, cane or beet (mt)	1,785	1,623	—	133	717	633	—	51
Oilseeds & products (mt)	2,077	2,330	—	190	959	1,124	1,200	93
Oilseeds (mt)	445	429	—	36	151	135	—	12
Protein meal (mt)	412	629	—	40	57	84	—	6
Vegetable oils (mt)	1,220	1,273	—	114	750	904	—	78
Beverages excl. fruit juices (1,000 hectoliters) 1/	12,987	13,739	—	1,251	1,858	2,044	—	181
Coffee, tea, cocoa, spices	2,045	2,391	2,210	181	3,294	3,415	—	234
Coffee, incl. products (mt)	1,116	1,330	1,200	100	1,831	1,798	1,600	121
Cocoa beans & products (mt)	700	773	740	58	1,019	1,122	1,000	73
Rubber & allied gums (mt)	792	920	1,000	78	864	756	900	68
Other	—	—	—	—	1,348	1,503	—	115
Total	—	—	—	—	22,588	24,323	25,000	2,121

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1992 began Oct. 1, 1991 & ended Sept. 30, 1992. 1/ Not included in total volume and also other dairy products for 1991 & 1992. 2/ Forecasts for footnoted items 2J-6J are based on slightly different groups of commodities. Fiscal 1991 exports of categories used in the 1991 forecasts were 2/ 678,000 m. tons. 3/ 16,014 million. 4/ 4,426 million i.e. includes flour. 5/ 11,065 million m. tons. 6/ Less than \$500. F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 219-0822.

Table 28.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*			May 1993	Change from year* earlier			May 1993
	1991	1992	1993 F		1991	1992	1993 F	
	\$ million				Percent			
WESTERN EUROPE	7,312	7,740	8,100	455	-1	6	5	-6
European Community (EC-12)	6,778	7,194	7,600	409	-1	6	8	-8
Belgium-Luxembourg	464	461	—	31	0	-1	—	-7
France	571	618	—	37	22	8	—	11
Germany	1,135	1,091	—	90	2	-4	—	-3
Italy	675	684	—	24	-4	1	—	-44
Netherlands	1,561	1,813	—	90	-5	16	—	5
United Kingdom	883	882	—	84	18	0	—	-8
Portugal	251	240	—	21	-28	-4	—	96
Spain, incl. Canary Islands	855	951	—	32	-12	11	—	-31
Other Western Europe	536	548	500	47	9	2	0	19
Switzerland	194	187	—	18	13	-4	—	30
EASTERN EUROPE	306	222	500	40	-36	-28	150	265
Poland	46	49	—	15	-54	8	—	223
Yugoslavia	74	60	—	1	-43	-32	—	-65
Romania	82	78	—	21	-61	-8	—	4,395
Former USSR	1,758	2,691	1,900	234	-42	53	-30	68
ASIA	16,094	17,782	17,400	1,364	-11	10	-2	-1
West Asia (Mideast)	1,430	1,770	1,900	125	-28	24	11	-10
Turkey	224	344	—	32	-14	54	—	-29
Iraq	0	0	0	0	-100	0	0	0
Israel, incl. Gaza & W. Bank	287	346	—	26	1	20	—	8
Saudi Arabia	536	549	400	25	7	2	-20	-19
South Asia	375	536	—	20	-48	43	—	-4
Bangladesh	67	123	—	1	-44	83	—	-95
India	94	117	—	15	-19	24	—	157
Pakistan	144	226	200	1	-63	57	0	72
China	868	691	400	40	-27	3	-43	-32
Japan	7,736	8,383	8,100	718	-5	8	-4	5
Southeast Asia	1,239	1,470	—	91	5	19	—	-6
Indonesia	279	353	—	21	1	27	—	-6
Philippines	373	443	500	30	6	19	25	-6
Other East Asia	4,646	4,934	4,900	369	-11	5	0	-2
Taiwan	1,739	1,918	1,900	135	-4	10	0	-20
Korea, Rep.	2,159	2,200	2,100	159	-20	2	-5	14
Hong Kong	745	817	900	76	9	10	13	12
AFRICA	1,882	2,304	2,500	196	-6	22	9	36
North Africa	1,386	1,412	1,600	138	-9	2	14	68
Morocco	129	156	—	22	-21	21	—	190
Algeria	477	478	500	49	-3	0	0	-3
Egypt	692	709	700	48	-9	2	0	101
Sub-Saharan	496	692	900	58	2	80	0	-7
Nigeria	44	31	—	13	38	-30	—	93
Rep. S. Africa	74	328	—	19	-9	345	—	-36
LATIN AMERICA & CARIBBEAN	5,499	6,438	6,700	537	7	17	5	-1
Brazil	271	143	200	11	158	-47	100	148
Caribbean Islands	1,010	970	—	81	0	-4	—	24
Central America	498	587	—	54	8	18	—	18
Colombia	124	142	—	15	-16	14	—	-1
Mexico	2,885	3,678	4,000	312	8	27	6	-9
Peru	150	178	—	9	-20	18	—	-18
Venezuela	307	394	400	34	-11	28	0	0
CANADA	4,409	4,812	5,000	501	19	9	4	18
OCEANIA	348	428	400	39	10	23	0	16
TOTAL	37,609	42,417	42,500	3,368	-6	13	0	7
Developed countries	20,106	21,969	22,200	1,752	2	9	1	4
Developing countries	16,831	19,758	—	1,573	-14	17	—	11
Other countries	672	691	—	40	-26	3	—	-32

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1992 began Oct. 1, 1991 & ended Sept. 30, 1992. F = forecast. — = not available.

Note: Adjusted for transshipments through Canada.

Information contact: Stephen MacDonald (202) 218-0822

## Farm Income

Table 29.—Farm Income Statistics

	Calendar year										
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992 F	1993 F
\$ billion											
1. Farm receipts											
Crops (incl. net CCC loans)	141.9	147.7	150.1	140.0	148.5	158.2	169.2	177.1	174.8	176	174 to 184
Livestock	67.2	69.9	74.3	63.7	65.9	71.7	76.9	80.0	80.5	83	81 to 86
Farm related 1/	5.1	4.9	8.0	5.7	6.6	7.1	8.2	7.2	7.8	7	8 to 8
2. Direct Government payments											
Cash payments	9.3	8.4	7.7	11.8	16.7	14.5	10.0	9.3	8.2	9	8 to 12
Value of PIK commodities	4.1	4.0	7.6	8.1	6.6	7.1	9.1	8.4	8.2	9	8 to 12
3. Gross cash income (1+2) 2/											
4. Nonmoney income 3/	151.1	158.1	157.9	152.8	165.1	171.7	180.2	186.4	183.2	186	185 to 193
5. Value of inventory change	13.6	5.9	5.8	5.5	5.8	6.1	6.2	6.1	5.9	6	6 to 7
6. Total gross farm income (3+4+5)	-10.9	6.0	-2.3	-2.2	-2.3	-3.4	4.8	3.5	0.4	4	-3 to 1
7. Cash expenses 4/	153.9	168.0	161.2	156.1	168.5	175.4	191.1	196.0	189.5	195	180 to 198
8. Total expenses	112.8	118.7	110.7	105.0	109.4	114.6	121.2	125.2	125.2	126	123 to 131
9. Net cash income (3-7)	139.8	141.9	132.4	125.1	128.8	134.3	141.2	145.1	144.9	144	142 to 151
10. Net farm income (6-8)	38.4	37.4	47.1	47.8	55.8	58.1	58.9	61.3	58.0	60	57 to 67
Deflated (1987\$)	14.2	28.1	28.8	31.0	39.7	41.1	49.9	51.0	44.6	50	44 to 51
	16.3	28.7	30.5	32.0	39.7	39.6	46.0	45.1	37.9	42	35 to 41

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. Total may not add because of rounding. F = forecast.

Information contact: Robert McElroy (202) 219-0800.

Table 30.—Average Income to Farm Operator Households

	Calendar year					
	1988	1989	1990	1991	1992 F	1993 F
\$ per operator household						
Farm income to household 1/						
Self-employment farm income	4,201	5,796	5,742	3,994	—	—
Other farm income to household	3,836	4,723	4,973	2,716	—	—
Plus: Total off-farm income	364	1,073	788	1,278	—	—
Income from wages, salaries, and non-farm businesses	28,829	26,223	33,265	32,549	—	—
Income from interest, dividends, transfer payments, etc.	22,220	19,487	24,778	24,404	—	—
Equals: Farm operator household income	6,610	6,758	8,487	8,144	—	—
	33,030	32,019	39,007	36,542	—	—

1/ Farm income to the household equals self-employment income plus amounts that operators pay themselves & family members to work on the farm, income from renting out acreage, & net income from a farm business other than the one being surveyed. Data for 1988-90 are based on surveys that did not fully account for small farms. Data for 1991 include an additional 350,000 farms, many with gross sales under \$10,000 & negative net farm incomes. F = forecasts, not available at this time.

Information contact: Janet Perry (202) 219-0807.

Table 31.—Balance Sheet of the U.S. Farming Sector

	Calendar year 1/										
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992F	1993 F
\$ billion											
<b>Assets</b>											
Real estate	753.4	661.8	586.2	542.3	578.9	595.5	615.5	627.5	622.8	633	640 to 650
Non-real estate	189.8	195.2	186.5	182.1	193.7	205.4	213.4	219.0	218.3	223	210 to 220
Livestock & poultry	49.5	49.5	46.3	47.8	58.0	62.2	66.2	70.9	68.1	71	69 to 71
Machinery & motor vehicles	85.8	85.0	82.9	81.5	80.0	81.0	84.5	84.3	83.7	83	81 to 85
Crops stored 2/	23.6	26.1	22.9	16.3	17.5	23.3	23.4	22.8	23.6	24	22 to 26
Purchased inputs	—	2.0	1.2	2.1	3.2	3.5	2.8	2.6	2.6	3	2 to 4
Financial assets	30.9	32.6	33.3	34.5	35.1	35.4	36.8	38.3	40.3	42	41 to 45
Total farm assets	943.2	857.0	772.7	724.4	772.6	800.9	828.9	846.5	841.1	856	860 to 870
<b>Liabilities</b>											
Real estate debt 3/	103.2	106.7	100.1	90.4	82.4	77.6	75.4	73.7	74.4	76	74 to 78
Non-real estate debt 4/	87.9	87.1	77.5	66.6	52.0	61.7	61.8	63.1	64.3	64	64 to 68
Total farm debt	191.1	193.8	177.8	157.0	144.4	139.4	137.2	136.8	138.8	140	139 to 145
Total farm equity	752.2	663.3	595.1	567.5	628.2	661.6	691.8	709.8	702.3	716	720 to 730
Percent											
<b>Selected ratios</b>											
Debt-to-assets	20.3	22.6	23.0	21.7	18.7	17.4	16.6	16.2	16.5	16	16 to 17
Debt-to-equity	25.5	29.2	29.8	27.7	23.0	21.1	19.8	19.3	19.8	20	19 to 21
Debt-to-net cash income	498	518	377	328	259	240	233	223	239	234	220 to 240

1/ As of Dec. 31. 2/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 4/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 219-0798.

Table 32.—Cash Receipts From Farm Marketings, by State

Region & State	Livestock & products				Crops 1/				Total 1/			
	1991	1992	Apr 1993	May 1993	1991	1992	Apr 1993	May 1993	1991	1992	Apr 1993	May 1993
	\$ million 2/											
<b>NORTH ATLANTIC</b>												
Maine	252	244	25	26	192	195	23	13	445	439	49	39
New Hampshire	83	63	6	8	80	76	8	6	143	139	14	12
Vermont	368	400	32	33	66	66	12	7	433	486	44	41
Massachusetts	121	121	11	12	355	342	22	19	476	463	33	31
Rhode Island	13	13	1	1	58	58	6	5	71	71	7	8
Connecticut	209	201	23	23	255	240	25	19	463	441	48	42
New York	1,782	1,885	181	164	1,087	1,077	88	70	2,868	2,963	249	234
New Jersey	197	196	16	17	464	478	33	32	660	673	49	48
Pennsylvania	2,470	2,549	221	224	1,033	1,050	93	79	3,503	3,599	314	303
<b>NORTH CENTRAL</b>												
Ohio	1,681	1,608	140	135	2,212	2,310	108	138	3,893	3,917	248	273
Indiana	1,893	1,731	156	138	2,582	2,696	84	123	4,475	4,428	239	281
Illinois	2,344	2,221	192	196	5,165	5,524	242	340	7,509	7,745	434	538
Michigan	1,288	1,291	119	118	1,793	1,947	132	109	3,081	3,239	251	225
Wisconsin	4,216	4,434	381	401	1,234	1,228	59	61	5,449	5,660	439	481
Minnesota	3,577	3,519	325	330	3,359	3,464	129	113	6,936	6,983	453	443
Iowa	5,721	5,350	457	613	4,458	4,843	188	264	10,179	10,192	843	777
Missouri	2,203	2,109	190	186	1,658	1,959	60	98	3,861	4,068	250	282
North Dakota	699	685	53	41	1,857	2,368	134	87	2,556	3,053	187	128
South Dakota	2,176	2,088	209	152	1,088	1,243	50	40	3,284	3,312	260	192
Nebraska	5,934	5,788	393	588	2,888	3,085	129	134	8,821	8,872	523	722
Kansas	4,802	4,954	394	430	2,133	2,424	69	98	6,935	7,379	483	528
<b>SOUTHERN</b>												
Delaware	438	453	44	54	181	175	10	9	820	628	54	63
Maryland	779	831	70	79	554	573	50	39	1,332	1,404	121	118
Virginia	1,363	1,433	149	103	732	728	30	32	2,095	2,161	150	135
West Virginia	253	252	22	20	77	79	3	3	330	331	25	23
North Carolina	2,608	2,635	.272	243	2,318	2,318	79	88	4,924	4,954	351	329
South Carolina	549	519	48	45	877	827	28	25	1,225	1,147	74	70
Georgia	2,153	2,122	.219	206	1,825	1,795	73	78	3,978	3,916	292	285
Florida	1,172	1,139	95	91	4,969	4,678	802	671	6,141	5,816	897	763
Kentucky	1,704	1,652	116	103	1,475	1,618	28	32	3,179	3,271	144	135
Tennessee	1,045	1,028	80	83	933	1,062	34	33	1,978	2,090	115	115
Alabama	2,219	2,111	173	182	759	790	48	34	2,878	2,901	221	216
Mississippi	1,275	1,318	114	125	1,147	1,265	32	22	2,422	2,583	146	147
Arkansas	2,680	2,821	231	239	1,631	1,945	30	28	4,311	4,565	261	287
Louisiana	621	620	50	46	1,172	1,291	24	18	1,793	1,911	74	65
Oklahoma	2,767	2,668	257	303	1,040	1,144	48	62	3,808	3,812	305	365
Texas	7,914	7,870	879	806	4,212	4,159	197	265	12,128	12,028	1,078	1,071
<b>WESTERN</b>												
Montana	790	766	55	64	741	830	51	37	1,531	1,596	106	101
Idaho	1,073	1,109	108	104	1,543	1,620	113	71	2,816	2,730	219	175
Wyoming	643	620	43	41	170	167	4	4	813	787	48	45
Colorado	2,664	2,694	251	254	1,097	1,086	60	52	3,761	3,779	311	306
New Mexico	1,019	968	95	89	482	469	23	35	1,501	1,437	118	124
Arizona	786	823	80	99	1,104	940	40	87	1,890	1,764	121	186
Utah	553	583	44	43	178	192	24	9	731	775	68	52
Nevada	187	187	18	18	89	74	8	4	278	260	28	23
Washington	1,290	1,364	134	119	2,657	2,932	154	123	3,947	4,296	288	242
Oregon	824	826	63	55	1,631	1,697	92	68	2,454	2,524	155	123
California	5,272	5,258	446	473	12,815	12,838	817	798	17,887	18,095	1,264	1,271
Alaska	8	8	0	0	20	20	1	1	27	27	2	2
Hawaii	91	91	7	8	506	495	38	39	597	586	45	47
<b>UNITED STATES</b>	86,746	85,996	7,640	7,827	80,550	84,280	4,631	4,621	167,292	170,278	12,271	12,447

1/ Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realized on redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 219-0806 To receive current monthly cash receipts via mail or E - Mail contact Linda Farmer at (202) 219-0804.

Table 33.—Cash Receipts From Farming

	Annual						1992 May	1993				
	1987	1988	1989	1990	1991	1992 P		Jan	Feb	Mar	Apr	May
	\$ million											
Farm marketings & CCC loans*	141,844	151,102	161,027	169,920	167,292	170,275	11,670	15,283	11,941	12,844	12,271	12,447
Livestock & products	75,993	75,438	84,148	89,921	86,745	85,996	7,133	6,626	7,048	7,543	7,840	7,827
Meat animals	44,478	48,492	46,857	51,911	51,093	48,988	3,998	3,612	4,242	4,341	4,365	4,509
Dairy products	17,727	17,841	19,398	20,210	18,114	19,709	1,727	1,580	1,402	1,818	1,734	1,793
Poultry & eggs	11,515	12,868	15,372	15,243	15,063	14,801	1,235	1,226	1,226	1,391	1,361	1,339
Other	2,274	2,437	2,524	2,557	2,476	2,497	173	209	177	193	180	186
Crops	65,851	71,663	76,679	79,999	80,547	84,280	4,538	8,657	4,893	5,302	4,631	4,621
Food grains	5,790	7,474	8,247	7,512	6,823	8,946	298	735	409	347	224	258
Feed crops	14,635	14,298	17,054	18,600	19,012	20,352	824	3,012	1,480	1,405	842	847
Cotton (lint & seed)	4,189	4,548	5,033	5,489	5,589	5,404	71	693	280	179	103	34
Tobacco	1,816	2,083	2,415	2,741	2,886	2,967	0	485	41	36	5	0
Oil-bearing crops	11,283	13,500	11,868	12,294	12,547	13,065	713	1,663	650	866	402	778
Vegetables & melons	9,898	9,788	11,534	11,455	11,293	11,235	1,102	786	573	983	1,253	1,398
Fruits & tree nuts	8,065	9,202	8,298	9,534	9,882	9,885	489	461	450	378	367	219
Other	10,176	10,772	11,435	12,284	12,514	12,426	1,040	822	810	1,129	1,435	1,086
Government payments	18,747	14,480	10,897	9,298	8,214	9,169	729	224	1,054	3,936	2,001	945
Total	158,591	165,582	171,814	179,218	175,506	179,338	12,399	15,507	12,995	16,780	14,272	13,392

\* Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realized on redemptions during the period. P = preliminary.

Information contact: Roger Strickland (202) 219-0808. To receive current monthly cash receipts via mail or E-Mail contact Linda Farmer at (202) 219-0804.

Table 34.—Farm Production Expenses

	Calendar year										
	1984	1985	1986	1987	1988	1989	1990	1991	1992F	1993F	
	\$ million										
Feed purchased	19,383	16,949	17,472	17,463	20,393	21,002	20,796	19,800	20,000	18,000	to 22,000
Livestock & poultry purchased	9,487	9,184	9,788	11,842	12,764	13,138	14,832	14,358	14,000	12,000	to 18,000
Seed purchased	3,388	3,128	3,188	3,259	3,359	3,558	3,578	3,975	4,000	3,000	to 5,000
Farm-origin inputs	32,258	29,261	30,418	32,564	36,515	37,698	39,114	38,133	38,000	38,000	to 40,000
Fertilizer & lime	8,381	7,513	8,820	8,453	8,947	7,249	7,135	7,418	7,000	6,000	to 8,000
Fuels & oils	7,298	6,436	5,310	4,957	4,903	4,798	5,730	5,472	5,000	4,000	to 7,000
Electricity	2,060	1,878	1,795	2,158	2,289	2,543	2,480	2,483	2,000	1,000	to 3,000
Pesticides	4,688	4,334	4,324	4,512	4,577	5,437	5,730	6,313	7,000	6,000	to 8,000
Manufactured inputs	22,404	20,160	18,249	18,077	18,716	20,027	21,063	21,587	21,000	20,000	to 24,000
Short-term interest	10,398	8,735	7,367	6,787	6,707	6,910	6,911	6,615	6,000	6,000	to 8,000
Real estate interest 1/	10,733	9,878	9,131	8,187	7,885	7,761	7,607	7,319	7,000	8,000	to 8,000
Total interest charges	21,129	18,613	16,498	14,954	14,582	14,691	14,518	13,934	14,000	12,000	to 18,000
Repair & maintenance 1/	6,416	6,370	6,426	6,760	6,858	7,340	7,347	7,234	8,000	7,000	to 9,000
Contract & hired labor	9,427	10,008	9,484	9,975	10,441	11,110	12,541	12,595	13,000	10,000	to 14,000
Machine hire & custom work	2,586	2,354	2,099	2,105	2,354	2,682	2,633	2,722	3,000	2,000	to 4,000
Marketing, storage, & transportation	4,012	4,127	3,652	4,078	3,450	4,080	4,045	4,632	5,000	4,000	to 8,000
Misc. operating expenses 1/ 2/	10,331	10,010	9,769	11,171	11,791	12,522	12,364	13,256	13,000	10,000	to 14,000
Other operating expenses	32,751	32,668	31,420	34,089	34,894	37,734	38,931	40,359	41,000	38,000	to 44,000
Capital consumption 1/	20,847	18,299	17,788	17,092	17,344	17,780	17,494	17,352	17,000	18,000	to 20,000
Taxes 1/	4,337	4,542	4,012	4,853	4,848	5,127	5,623	5,980	6,000	5,000	to 7,000
Net rent to nonoperator landlord	8,150	7,690	8,099	7,124	7,290	8,187	8,334	7,484	8,000	7,000	to 9,000
Other overhead expenses	33,334	31,531	28,499	29,069	29,482	31,094	31,451	30,796	31,000	30,000	to 33,000
Total production expenses	141,873	132,433	125,084	128,772	134,285	141,244	145,077	144,889	145,000	146,000	to 148,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases, dairy assessments & feeding fees paid by nonoperators. Totals may not add because of rounding. F = forecast.

Information contacts: Chris McGath (202) 219-0804, Robert McElroy (202) 219-0800.

Table 35.—CCC Net Outlays by Commodity &amp; Function

	Fiscal year									
	1985	1986	1987	1988	1989	1990	1991	1992	1993 E	1994 E
	\$ million									
<b>COMMODITY/PROGRAM</b>										
Feed grains										
Corn	4,403	10,524	12,346	8,227	2,863	2,450	2,387	2,105	5,250	3,180
Grain sorghum	463	1,185	1,203	784	467	361	243	190	423	274
Barley	336	471	394	57	45	-93	71	174	185	103
Oats	2	26	17	-2	1	-5	12	32	17	6
Corn & oat products	7	5	7	7	8	8	9	9	8	10
Total feed grains	5,211	12,211	13,967	9,053	3,384	2,721	2,722	2,510	5,883	3,573
Wheat	4,691	3,440	2,836	678	53	806	2,958	1,719	2,274	1,847
Rice	990	947	906	128	631	667	867	715	889	741
Upland cotton	1,553	2,142	1,788	666	1,461	-79	382	1,443	2,436	2,317
Tobacco	455	253	-346	-453	-367	-307	-143	29	-2	-13
Dairy	2,085	2,337	1,166	1,295	679	505	839	232	125	230
Soybeans	711	1,597	-476	-1,676	-88	5	40	-29	41	-40
Peanuts	12	32	8	7	13	1	48	41	33	1
Sugar	184	214	-65	-246	-25	15	-20	-19	-28	-30
Honey	81	89	73	100	42	47	19	17	17	12
Wool	109	123	152	1/ 5	93	104	172	191	183	191
Operating expense 3/	346	457	535	614	620	618	625	6	7	6
Interest expenditure	1,435	1,411	1,219	425	98	632	745	532	195	184
Export programs 4/	134	102	276	200	-102	-34	733	1,455	3,066	1,845
1989/92 Disaster/Tree/	0	0	0	0	3,919	2/ 161	121	1,054	1,226	0
livestock assistance					110	609	2	-158	789	1,293
Other	-314	486	371	1,665						
<b>Total</b>	<b>17,683</b>	<b>25,841</b>	<b>22,408</b>	<b>12,461</b>	<b>10,523</b>	<b>6,471</b>	<b>10,110</b>	<b>9,738</b>	<b>17,134</b>	<b>12,137</b>
<b>FUNCTION</b>										
Price-support loans (net)	6,272	13,628	12,198	4,579	-926	-399	418	584	2,183	785
Direct payments 5/										
Deficiency	6,302	6,166	4,833	3,971	5,798	4,178	6,224	5,491	8,813	7,009
Diversion	1,525	84	382	8	-1	0	0	0	0	0
Dairy termination	0	489	587	260	168	189	96	2	0	0
Loan Deficiency	0	27	60	0	42	3	21	214	390	438
Other	0	0	0	0	0	0	0	140	200	175
Disaster	0	0	0	6	4	0	0	0	0	0
<b>Total direct payments</b>	<b>7,827</b>	<b>6,746</b>	<b>5,862</b>	<b>4,245</b>	<b>6,011</b>	<b>4,370</b>	<b>6,341</b>	<b>5,847</b>	<b>9,403</b>	<b>7,622</b>
1988-92 crop disaster	0	0	0	0	3,386	2/ 5	6	960	1,137	0
Emergency livestock/tree/	0	0	0	31	533	156	115	94	89	0
forage assistance	0	0	-479	-1,131	116	-48	648	321	335	298
Purchases (net)	1,331	1,670								
Producer storage										
payments	329	485	832	658	174	185	1	14	19	67
Processing, storage,										
& transportation	657	1,013	1,659	1,113	659	317	394	185	135	128
Operating expense 3/	346	457	535	514	620	618	625	6	7	6
Interest expenditure	1,435	1,411	1,219	425	98	632	745	532	195	164
Export programs 4/	134	102	276	200	-102	-34	733	1,455	3,066	1,845
Other	-648	329	305	1,727	-46	669	86	-260	565	1,222
<b>Total</b>	<b>17,683</b>	<b>25,841</b>	<b>22,408</b>	<b>12,461</b>	<b>10,523</b>	<b>6,471</b>	<b>10,110</b>	<b>9,738</b>	<b>17,134</b>	<b>12,137</b>

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$126,108,000, which was recorded as a wool program receipt by Treasury. 2/ Approximately \$1.5 billion in benefits to farmers under the Disaster Assistance Act of 1989 were paid in generic certificates & were not recorded directly as disaster assistance outlays. 3/ Does not include CCC Transfers to General Sales Manager. 4/ Includes Export Guarantee Program, Direct Export Credit Program, CCC Transfers to the General Sales Manager, Market Promotion Program, starting in fiscal 1991 & starting in fiscal 1992 the Export Guarantee Program - Credit Reform, Export Enhancement Program, & Dairy Export Incentive Program. 5/ Includes cash payments only. Excludes payment-in-kind in fiscal 83-85 & generic certificates in fiscal 86-93. E = Estimated in the fiscal 1994 Budget which was released April 8, 1993 based on November 1992 supply & demand estimates. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalski (202) 720-5148.

## Food Expenditures

Table 36.—Food Expenditures

	Annual			1993			1993 year-to-date		
	1990 R	1991 R	1992 R	May	June	July P	May	June P	July P
\$ billion									
<b>Sales 1/</b>									
Off-premise use 2/	302.8	315.5	323.0	27.9	26.8	28.5	132.4	159.1	187.6
Meals & snacks 3/	226.2	232.3	241.3	22.0	20.9	22.4	100.9	121.9	144.2
1992 \$ billion									
<b>Sales 1/</b>									
Off-premise use 2/	313.1	317.8	323.0	27.1	26.0	27.8	129.6	155.7	183.5
Meals & snacks 3/	237.8	237.0	241.3	21.7	20.5	21.9	99.7	120.2	142.2
Percent change from year earlier (\$ bil.)									
<b>Sales 1/</b>									
Off-premise use 2/	8.9	4.2	2.4	2.1	0.4	1.9	2.6	2.2	2.1
Meals & snacks 3/	7.2	3.1	3.9	5.0	4.3	8.6	3.0	3.2	4.0
Percent change from year earlier (1992 \$ bil.)									
<b>Sales 1/</b>									
Off-premise use 2/	2.2	1.5	0.4	-1.1	-2.9	-1.2	0.5	-0.1	-0.3
Meals & snacks 3/	2.4	-0.2	1.8	3.2	2.4	6.7	1.4	1.6	2.4

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations & home production. 3/ Excludes donations, child nutrition subsidies, & meals furnished to employees, patients, & inmates. P = preliminary.

NOTE: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food, nonalcoholic beverages & pet food which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced & consumed on farms & food furnished to employees; (4) this series includes all sales of meals & snacks. PCE includes only purchases using personal funds, excluding business travel & entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," Agr. Econ. Rpt. No. 575, Aug. 1987.

Information contact: Alden Manchester (202) 219-0680.

## Transportation

**Table 37.—Rail Rates: Grain & Fruit-Vegetable Shipments**

	Annual			1992		1993					
	1990	1991	1992	May	Dec	Jan	Feb	Mar	Apr	May	
Rail freight rate index 1/ (Dec. 1984=100)											
All products	107.5	109.3	109.8	110.0	110.3	110.5	110.4 P	110.6 P	110.6 P	110.6 P	110.6 P
Farm products	110.4	111.4	111.1	110.3	113.4	113.4	113.0 P	113.5 P	113.5 P	113.5 P	113.3 P
Grain	110.1	111.2	111.4	110.5	114.4	114.4	113.9 P	114.5 P	114.5 P	114.5 P	114.2 P
Food products	105.4	108.1	108.7	109.4	108.7	108.7	108.7 P	108.8 P	108.8 P	108.8 P	108.7 P
Grain shipments											
Rail carloadings (1,000 cars) 2/	27.6	26.8	27.3	20.5	29.7 P	29.6 P	30.7 P	30.1 P	28.0 P	24.7	
Barge shipments (mil. ton) 3/	3.8	3.3	3.4	4.1	2.9	2.0	1.7	3.0	2.5	3.7	
Fresh fruit & vegetable shipments 4/ 5/											
Piggy back (mil. cwt)	1.8	1.5	1.6	2.3	1.4	1.4	1.4	1.6	1.4	1.9	
Rail (mil. cwt)	2.3	2.1	2.6	3.5	3.0	2.5	2.2	2.8	2.0	3.0	
Truck (mil. cwt)	41.5	41.9	44.0	55.7	41.1	40.8	39.1	44.0	48.2	57.2	
Cost of operating trucks hauling produce 4/											
Fleet operation (cts./mile)	130.5	126.5	124.1	123.8	125.1	127.0	127.0	127.0	127.0	127.0	127.3

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Shipments on Illinois & Mississippi waterways, U.S. Corps of Engineers. 4/ Agricultural Marketing Service, USDA. 5/ Preliminary data for 1993. P = preliminary. — = not available.

Information contact: T.Q. Hutchinson (202) 219-0840.

## Indicators of Farm Productivity

**Table 38.—Indexes of Farm Production, Input Use & Productivity** <sup>1/</sup>

New data are being incorporated. The table will appear in the November issue.

Information contact: Eldon Ball (202) 219-0432.

## Food Supply &amp; Use

Table 39.—Per Capita Consumption of Major Food Commodities<sup>1/</sup>

Commodity	1985	1986	1987	1988	1989	1990	1991	1992 P
Pounds								
Red meats 2/3/4/	124.9	122.2	117.4	119.5	115.9	112.4	111.9	114.1
Beef	74.6	74.4	69.6	68.6	65.4	64.0	63.1	62.8
Veal	1.5	1.6	1.3	1.1	1.0	0.9	0.8	0.8
Lamb & mutton	1.1	1.0	1.0	1.0	1.1	1.1	1.0	1.0
Pork	47.7	45.2	45.6	48.8	48.4	46.4	46.9	49.5
Poultry 2/3/4/	45.2	47.1	50.7	51.7	53.8	55.9	58.0	60.1
Chicken	36.1	37.0	39.1	39.3	40.5	42.1	43.9	45.9
Turkey	9.1	10.2	11.6	12.4	13.1	13.8	14.1	14.2
Fish & shellfish 3/	15.0	15.4	16.1	15.1	16.6	15.0	14.8	14.7
Eggs 4/	32.7	32.6	32.5	31.5	30.2	29.9	29.8	30.0
Dairy products								
Cheese (excluding cottage) 2/5/	22.5	23.1	24.1	23.7	23.8	24.6	25.0	26.0
American	12.2	12.1	12.4	11.5	11.0	11.1	11.1	11.3
Italian	6.5	7.0	7.6	8.1	8.5	9.0	9.4	10.0
Other cheese 6/	3.9	4.0	4.1	4.1	4.3	4.6	4.6	4.7
Cottage cheese	4.1	4.1	3.9	3.9	3.8	3.4	3.3	3.1
Beverage milks 2/	229.7	228.6	226.5	222.4	224.3	221.7	221.2	218.5
Fluid whole milk 7/	123.4	116.5	111.9	105.7	97.6	90.4	87.4	84.1
Fluid lowfat milk 8/	93.7	98.6	100.6	100.5	106.5	108.4	109.9	109.4
Fluid skim milk	12.6	13.5	14.0	16.1	20.2	22.9	23.9	25.0
Fluid cream products 9/	6.7	7.0	7.1	7.1	7.3	7.1	7.3	7.5
Yogurt (excluding frozen)	4.1	4.4	4.4	4.7	4.3	4.1	4.2	4.3
Ice cream	18.1	18.4	18.4	17.3	16.1	15.8	16.3	16.4
Ice milk	6.9	7.2	7.4	8.0	8.4	7.7	7.4	7.1
Frozen yogurt	—	—	—	—	2.0	2.8	3.5	3.1
All dairy products, milk equivalent, milkfat basis 10/	593.8	591.5	601.3	582.9	565.2	569.8	565.2	564.6
Fats & oils — Total fat content	64.3	64.4	62.9	63.0	60.4	62.2	63.8	65.6
Butter & margarine (product weight)	15.7	16.0	15.2	14.8	14.6	15.3	14.8	15.2
Shortening	22.9	22.1	21.4	21.5	21.5	22.2	22.4	22.4
Lard & edible tallow (direct use)	3.7	3.5	2.7	2.6	2.1	2.5	3.1	4.1
Salad & cooking oils	23.5	24.2	25.4	25.8	24.0	24.2	25.2	25.6
Fresh fruits 11/	86.5	92.8	97.3	97.0	96.6	92.2	89.8	98.7
Canned fruit 12/	12.7	12.9	13.6	13.3	13.3	13.5	12.3	14.4
Dried fruit	2.9	2.7	3.1	3.3	3.2	3.6	3.1	3.2
Frozen fruit	3.3	3.6	3.9	3.8	4.6	4.3	3.9	4.7
Selected fruit juices 13/	66.9	65.0	70.0	64.7	67.0	59.6	63.8	59.6
Vegetables 11/								
Fresh	100.7	99.3	105.8	109.7	112.9	110.9	108.0	108.1
Canning	87.8	87.9	87.6	83.5	90.7	93.4	94.3	93.9
Freezing	17.1	15.8	16.8	18.3	17.8	18.3	19.3	17.5
Potatoes, all 11/	122.5	125.8	125.8	122.3	127.4	127.8	130.6	132.6
Sweetpotatoes 11/	5.4	4.4	4.4	4.1	4.1	4.6	4.0	4.2
Peanuts (shelled)	6.3	6.4	6.4	6.9	7.0	6.0	6.5	6.4
Tree nuts (shelled)	2.3	2.2	2.2	2.3	2.4	2.6	2.3	2.4
Flour & cereal products 14/	156.1	162.1	170.8	173.7	175.4	183.5	185.4	187.0
Wheat flour	124.7	125.7	130.0	130.0	129.6	135.8	138.5	138.3
Rice (milled basis)	9.0	11.6	14.0	14.3	15.2	16.2	16.8	16.8
Caloric sweeteners 15/	131.3	129.6	133.7	135.1	137.3	140.7	141.7	143.3
Coffee (green bean equiv.)	10.5	10.5	10.2	9.8	10.1	10.3	10.5	10.6
Cocoa (chocolate liquor equiv.)	3.7	3.8	3.8	3.8	4.0	4.3	4.6	4.6

1/ In pounds, retail weight unless otherwise stated. Consumption normally represents total supply minus exports, nonfood use, & ending stocks. Calendar-year data except fresh citrus fruits, peanuts, tree nuts, & rice, which are on crop-year basis. 2/ Total may not add due to rounding. 3/ Boneless, trimmed weight. Chicken series revised to exclude amount of ready-to-cook chicken going to pet food as well as some water leakage that occurs when chicken is cut up before packaging. 4/ Excludes shipments to the U.S. territories. 5/ Natural equivalent of cheese & cheese & other dairy products. Includes miscellaneous cheese not shown separately. 6/ Includes Swiss, Brick, Munster, cream, Neufchatel, Blue, Gorgonzola, Edam, & Gouda. 7/ Plain & flavored. 8/ Plain & flavored & buttermilk. 9/ Heavy cream, light cream, half & half, & sour cream & dip. 10/ Includes condensed & evaporated milk & dry milk products. 11/ Farm weight.

12/ Excludes pineapples & berries. 13/ Single strength equivalent. 14/ Includes rye, corn, oat, & barley products. Excludes quantities used in alcoholic beverages, corn sweeteners, & fuel. 15/ Dry weight equivalent. — not available. P = Preliminary.

Information contact: Judy Jones Putnam (202) 219-0862.

United States  
Department of Agriculture  
1301 New York Avenue, NW  
Washington, DC 20005-4789

FIRST CLASS  
POSTAGE & FEES PAID  
USDA  
PERMIT NO. G-145

OFFICIAL BUSINESS

Penalty for Private Use, \$300

MOVING? To change your address, send this sheet with label intact, showing new address to: EMS Information, Rm 228, 1301 New York Ave., NW, Washington, DC 20005-4789



## Want to Subscribe? Time to Renew?

Subscribe to *Agricultural Outlook* today! If you already subscribe to this timely periodical, note that expiration information about your subscription appears on the top line of your mailing label. The expiration information will appear in one of two formats: 1-AGO-2 (this means you have TWO issues remaining in your subscription) or APR95 (expiration date is April 1995). Disregard this notice if no renewal information appears.

Call toll free, 1-800-999-6779, and tell us whether you want to subscribe or renew, or return this form to: ERS-NASS, 341 Victory Drive, Herndon, VA 22070.

### Agricultural Outlook

Yes! I want to **start** my subscription.  
 Yes! I want to **renew** my subscription.

	1 Year	2 Years	3 Years
Domestic:	<input type="checkbox"/> \$33.00	<input type="checkbox"/> \$64.00	<input type="checkbox"/> \$95.00
Foreign:	<input type="checkbox"/> \$41.25	<input type="checkbox"/> \$80.00	<input type="checkbox"/> \$118.75

### New subscribers:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Daytime phone: ( ) \_\_\_\_\_

### Renewals:

ATTACH MAILING LABEL HERE

### Payment method:

Bill me (domestic orders only).  
 Enclosed is \$\_\_\_\_\_.

Use purchase orders, checks drawn on U.S. banks (and in U.S. funds), cashier's checks, or international money orders. **Make payable to ERS-NASS.** Please do not send cash.

Credit card orders:  MasterCard  Visa Total charges \$\_\_\_\_\_.

Credit card  
number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Card expiration  
date:

--	--

Month/Year

For fastest service, call our toll-free order desk 1-800-999-6779,  
in the U.S. and Canada; other areas please call 703-834-0125,  
or FAX this page to 703-834-0110.